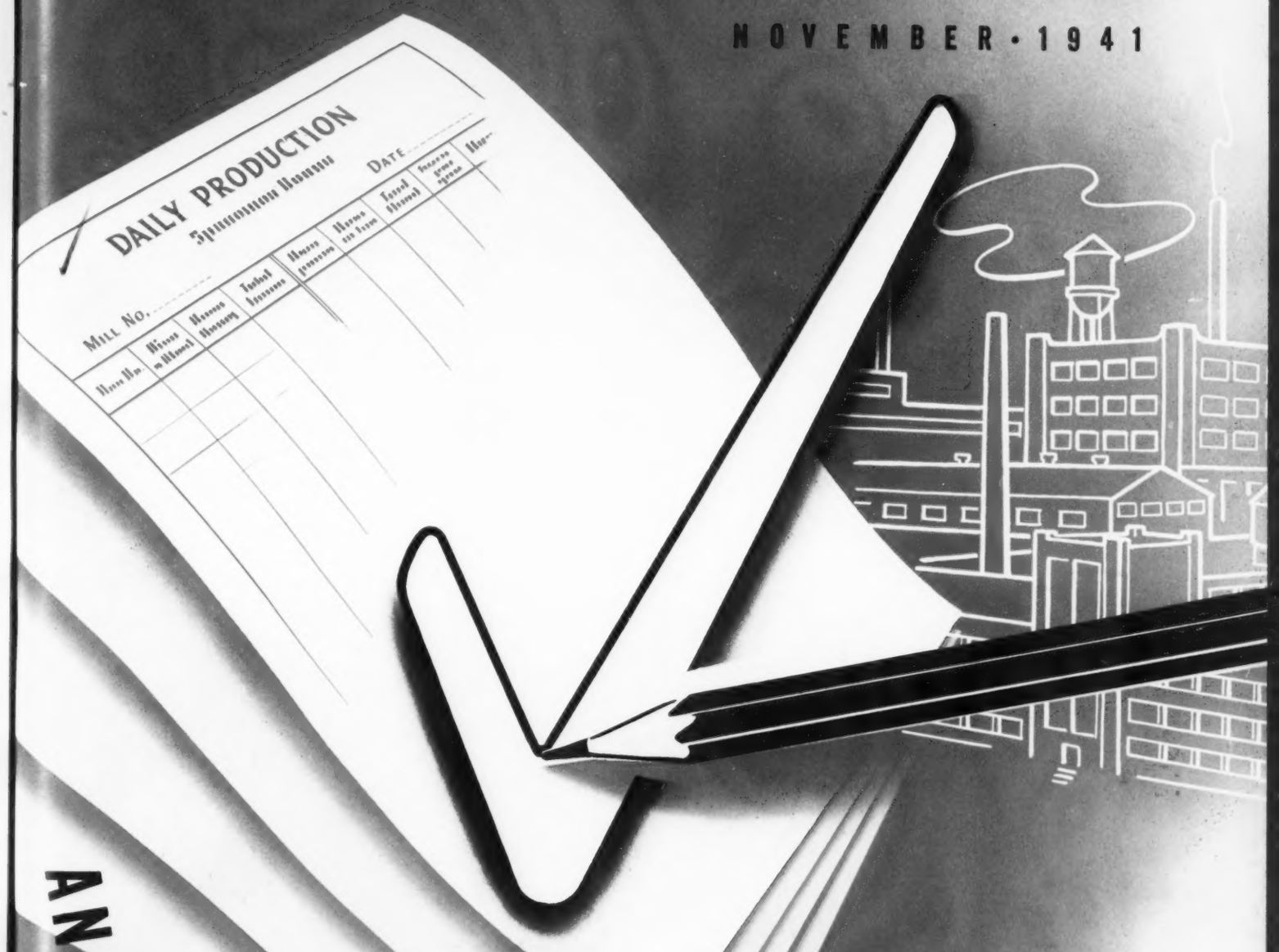
Textile World

NOVEMBER • 1941



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SEE SPECIAL SECTION

Commercial

FACTORING

More and more, the word "COMMERCIAL" is recognized as the "distinguishing mark" in factoring. It is the symbol of long experience, complete facilities and resources, and a knowledge of every branch of the textile industry.

We will gladly explain in detail what *COMMERCIAL FACTORING* can mean to your business in new opportunities and increased profits.

COMMERCIAL FACTORS CORPORATION

Fred'k Victor & Achelis, Inc.
Established 1828

Schefer, Schramm & Vogel
Established 1838

Peierls, Buhler & Co., Inc.
Established 1893

TWO PARK AVENUE, NEW YORK

SEVENTY-SEVEN FRANKLIN ST., BOSTON

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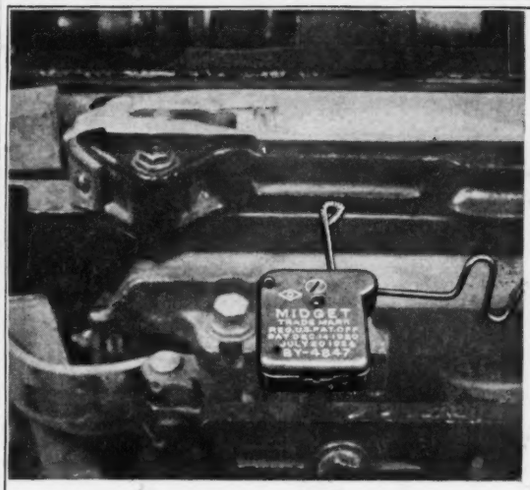

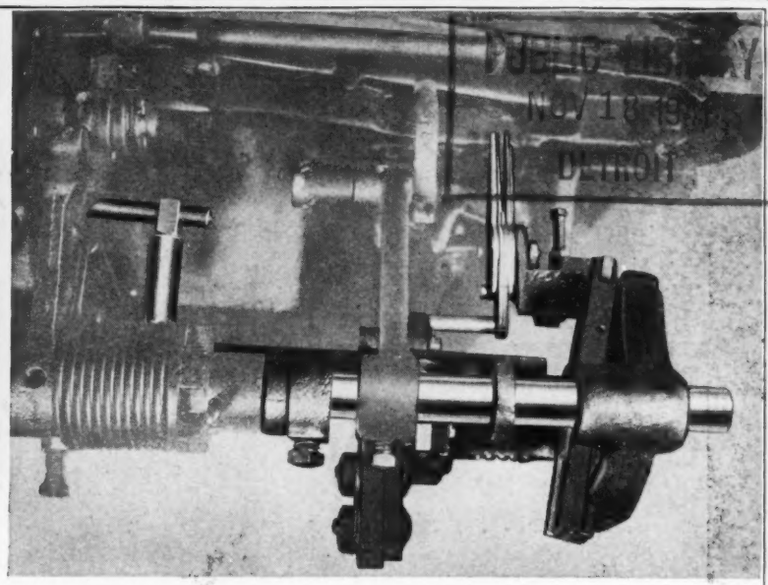

You Need the

Midget Feeler & Stafford Thread Cutter

On Your Draper Looms If You Want To Weave

Premium Priced Goods

A Tip for Every Weave

Recent Stafford Thread Cutter Improvements

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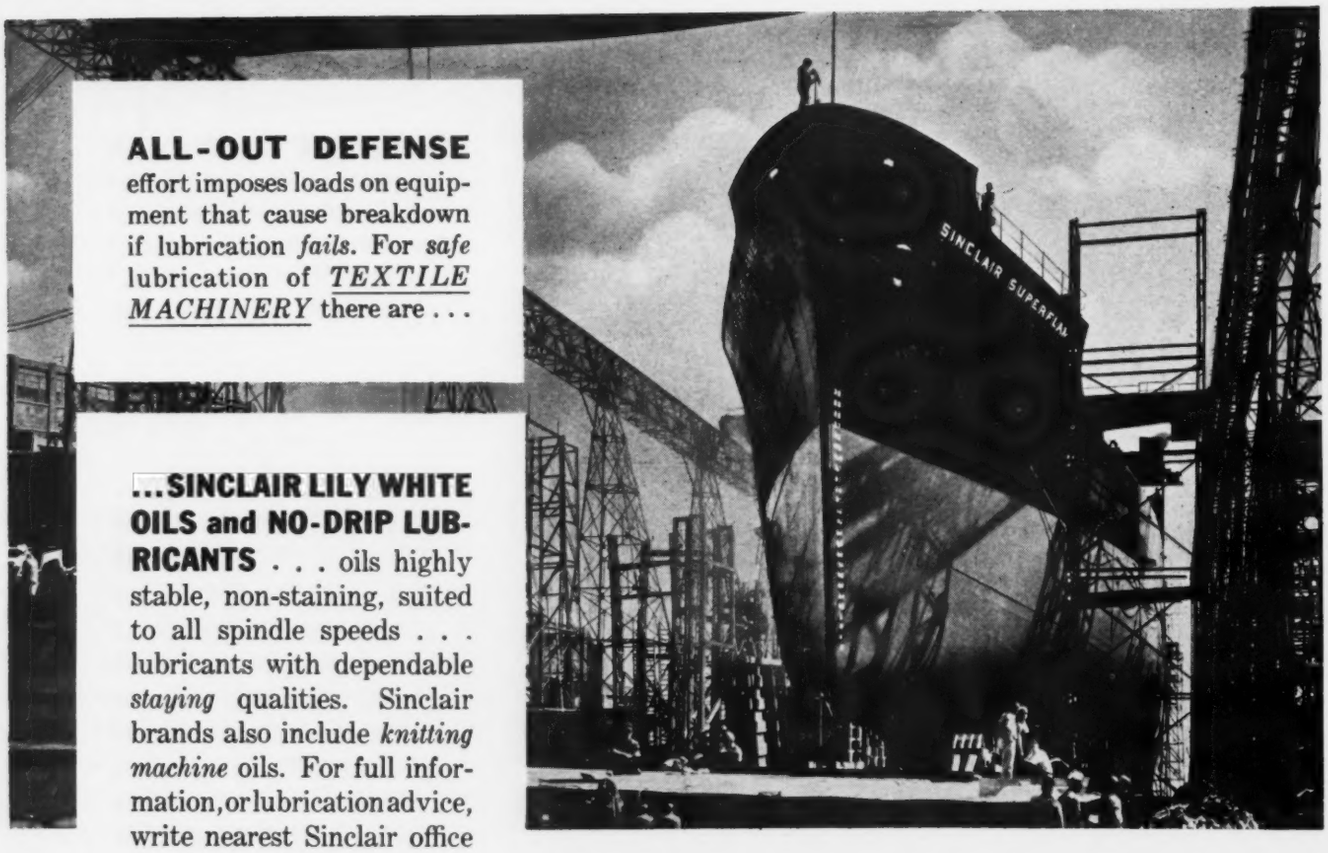
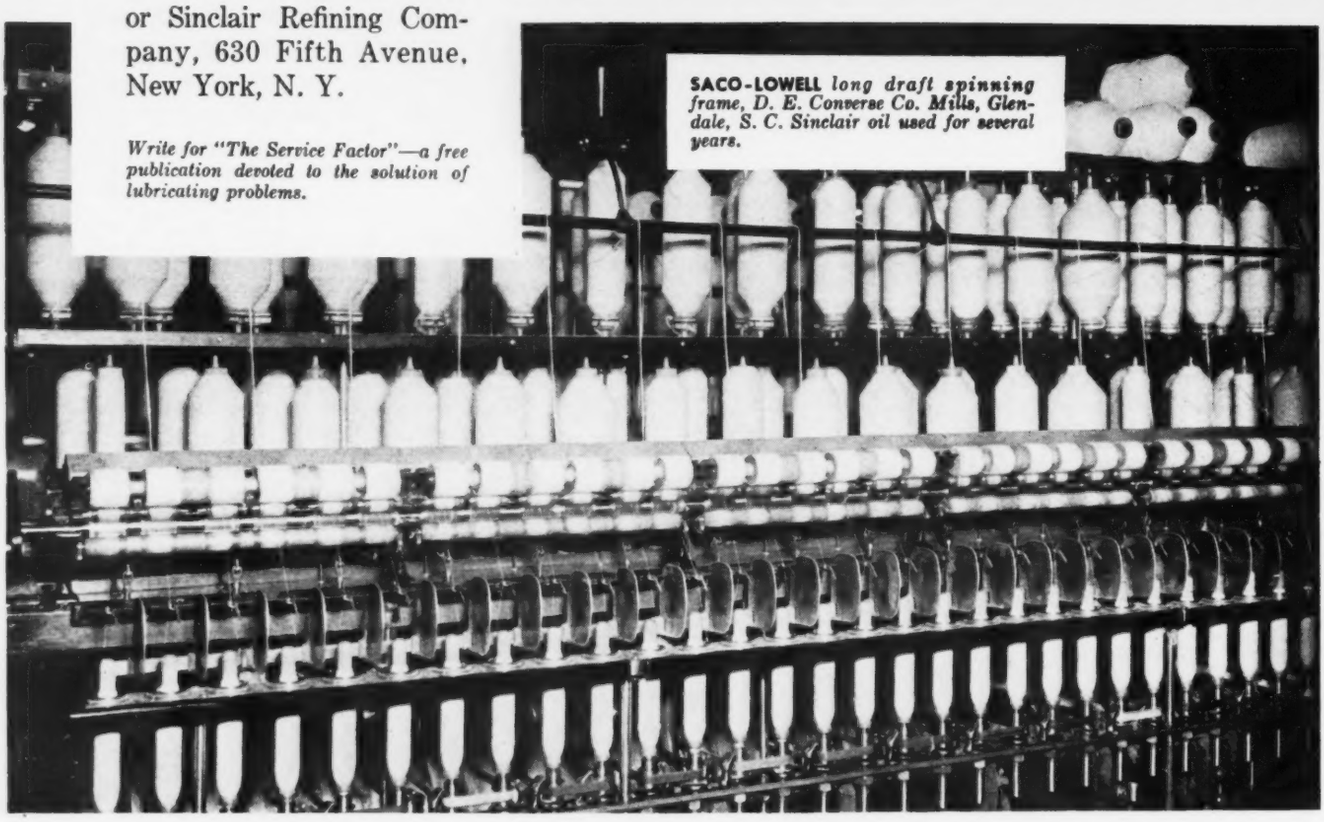


ALL-OUT DEFENSE effort imposes loads on equipment that cause breakdown if lubrication *fails*. For *safe* lubrication of *TEXTILE MACHINERY* there are . . .

. . . SINCLAIR LILY WHITE OILS and NO-DRIP LUBRICANTS . . . oils highly stable, non-staining, suited to all spindle speeds . . . lubricants with dependable *staying* qualities. Sinclair brands also include *knitting machine* oils. For full information, or lubrication advice, write nearest Sinclair office or Sinclair Refining Company, 630 Fifth Avenue, New York, N. Y.

Write for "The Service Factor"—a free publication devoted to the solution of lubricating problems.



SACO-LOWELL *long draft spinning frame, D. E. Converse Co. Mills, Glendale, S. C. Sinclair oil used for several years.*

SINCLAIR TEXTILE LUBRICANTS

SINCLAIR REFINING COMPANY (Inc.)

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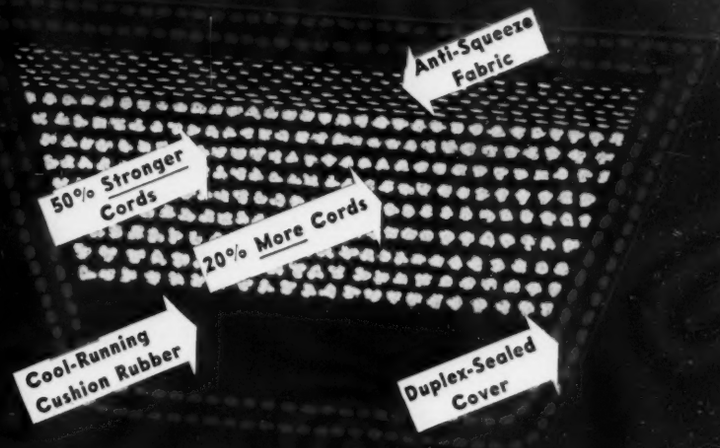
50% MORE CORD STRENGTH
IN NEW TEXROPE SUPER-7!

1 50% STRONGER CORDS! Sensational new Flexon process makes cords 50% stronger than even those in former great Texrope belts.

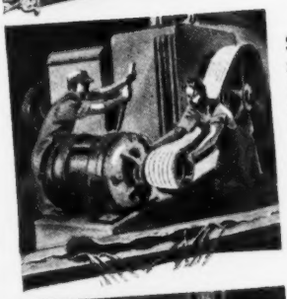
2 20% MORE CORDS! Count them! You get 20% more of these tough, extra pulling power cords in every Texrope Super-7.

3 INCREASED LIFE! Cords float on amazing cool-running cushion rubber that absorbs shock . . . actually increases belt life phenomenally.

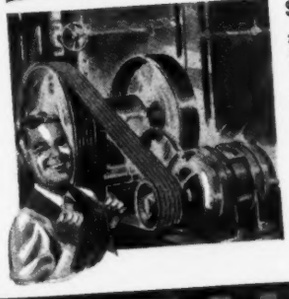
4 EXTRA PROTECTION! Exclusive duplex-sealed cover protects pulling cords against dirt, grit, moisture, and other adverse elements.



LOOK OUT FOR DANGER
in belts with stiff, unpliable cords! Such belts *look* strong...but actually they buckle over sheaves, build up excessive heat that attacks pulling cords. Result: Belt failure far sooner than you expect it.



WARNING SIGN!
Sagging, slipping belts mean too much stretch not backed up by balanced cord strength. Motor must be pulled back often to take up slack. Result: When stretch limit is reached belt breaks under tension.



SUPER-7 TEXROPE BELTS
are made by amazing Flexon process that *combines* flexibility with low stretch...great strength. Cords float on cool-running, shock absorbing cushion rubber. Result: *true* strength . . . *true* pulling power . . . *true* endurance.

GREATER strength . . . more flexibility . . . increased resistance to stretch . . . plus longer life — these are new operating features built into the NEW Texrope Super-7 V-belt!

And it's all made possible because of the recently developed "Flexon" process for making load-pulling V-belt cords *50% stronger than ever before!*

Then, on top of this — we float the cord section on a newly developed cool-running rubber cushion that absorbs operating shocks . . . provides maximum flexibility . . . dissipates internal heat . . . and assures longer life than ever before possible with any V-belt.

Finally — we wrap up the new belt in a two-ply wear-resisting cover that we "duplex-seal" for extra protection against dirt and moisture.

Built in true V-shape for greatest groove-grip action . . . and backed by famous Allis-Chalmers Texrope cooperative engineering—Texrope Super-7 is better and it costs no more!

Call your dealer or the nearby Allis-Chalmers district office. Or write us direct, asking for Bulletin B6190.

Available in All Sizes —
½ hp to 2000 hp

A 1452

*Trade mark registered U. S. Patent Office. Texrope Super-7 Belts are the result of the co-operative research and design genius of *two* great companies — Allis-Chalmers and B. F. Goodrich — and are sold exclusively by Allis-Chalmers.

ALLIS-CHALMERS
MILWAUKEE·WISCONSIN

More "Textile School Nonsense"

Comments by Henry G. Lord

I was pleasantly surprised at the comments on my "Textile School Nonsense" page in September. I am glad to know that somebody read it. My old friend, Franklin W. Hobbs, writes:

"I have just read with much interest, in the September issue, your article entitled 'Textile School Nonsense.' This brought back to me a good many recollections of the early days of the schools and you have shown very clearly what a change has taken place in the sentiment of the industry with reference to textile schools. I am very glad that in a small way, at any rate, through the Textile Foundation, I have been able to develop these schools and make them more useful to the industry than they would otherwise have been."

The Textile Foundation in its educational function is like the keystone to the educational arch which has been built up by the textile schools in different parts of the country. It is a coordinating, helpful and stimulating influence.

Another old friend, Robert Burgess, asked me why I did not speak of the Lowell School of Design connected with the Massachusetts Institute of Technology during the early days. When I was writing the September page, I did give some thought to whether I should include the Lowell School of Design which, I remember very well, was a pioneer in the movement for textile education, but as I recalled, was not very closely tied up with the mills. Apparently, I am wrong about this, as the following interesting letter from Mr. Burgess seems to show:

"Just a word or two about 'The Lowell School of Design' connected with the M. I. T. This School of Applied Design accomplished much for the New England mills.

"During the late seventies and the early eighties, the Ponemah Mills, of Taftville, Conn., were without question the best equipped mills in New England. Some of the machinery for multiple harness weaving was imported; some of it was built at the mills under the supervision of one of the best designers and practical weavers that could be found in England. I had the pleasure of verifying his record in 1898, when I visited many loom builders over there, and in each case the record of this man was brought into the conversation. They were pleased to know that he had made good in the U. S. A.

"In the years 1885 and 1886 several of the young men from the Ponemah Mills were students at the Lowell School of Design. These men were practical weavers. They came to the school to try and demonstrate that what they knew, was theoretically correct; also to get the knowledge required to transfer cloth construction to weaving requirements. These men made enviable records for themselves in New England mills.

"About this time George W. Stafford was striving to establish a business of building dobbies. The Crompton Company of Worcester was also thoroughly interested in multiple harness weaving. And the information brought from the Ponemah Mills was made good use of.

"During this period I was assistant in the Division of Applied Design at the school. I did not return the following year, as mill management was the goal I was striving for.

"The fate of the Lowell School of Design, like many of the New England mills, seems to have been, that when the personality which created it had passed on, the scattered interests following after were not strong enough to keep it alive.

"I think that this information may be of interest to you."

It certainly is to me, Mr. Burgess, and I know it will be to others. And by the way, I always welcome any comments on *my* comments.

HENRY G. LORD, *founder of Textile World and president, Bragdon, Lord & Nagle Division, McGraw-Hill Publishing Co.*

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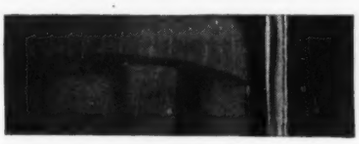
Leads Again With

COPRANTINE COLORS



For Direct Dyeing

FAST TO LIGHT AND WASHING

In the past, you have used Chlorantine Fast Colors where light-fastness was required . . . *In the past,* you have used Developed Colors where wash-fastness was required.

Now, these new COPRANTINE COLORS give you both light-fastness and wash-fastness! The application consists of a simple direct dyeing, an after treatment, and a soaping.

These dyestuffs are primarily for dyeing yarn, and piece goods of cotton and all rayons, except acetate.

They are available in a complete range that includes: Yellow — Bordeaux — Blues — Browns — Greys.

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Planning ahead...

Saco-Lowell Controlled Draft Roving in a Modern Card Room

Preliminary studies made now can be used as the basis for a long-range modernization program to be started later.

At the present time there are sound reasons which make it not altogether wise to undertake replacement of existing equipment. But the time is propitious to formulate the plans for a post-war modernization program that will establish your mill in a strong position in the future.

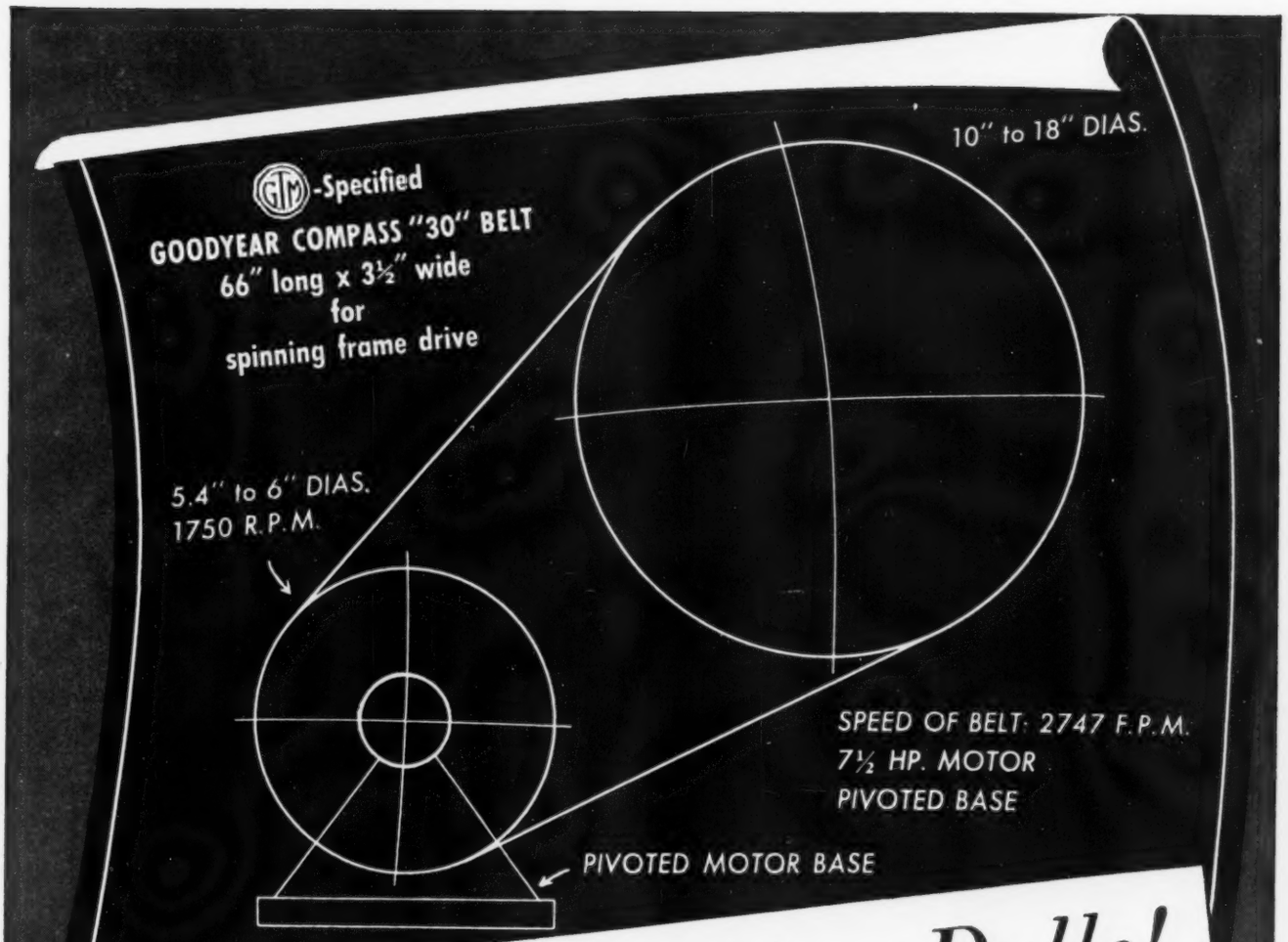
Tomorrow the continued operation of inefficient and obsolete equipment will be a serious drain on earnings and profits . . . and a decided handicap in a revived competitive market. Modernization will be the only solution . . . and valuable time can be saved and worthwhile progress made by accumulating today the pertinent facts and other valuable data on equipment which must be replaced.

Our engineering staff will be pleased to assist you in preparing the information necessary for a long-range modernization program.

SACO-LOWELL SHOPS

60 Batterymarch Street · Boston, Massachusetts

Charlotte, N. C. Greenville, S. C. Atlanta, Ga.



FOR *Long Life* ON *Short Pulls!*

At one of the largest textile mills in the South they have over 100 spinning frames operated by short center pivoted base drives with 6" pulleys. As you can well imagine, this is a stiff belting assignment. In fact, the constant strain of flexing around the small pulleys was too much for conventional belts. Some slipped badly, wore out in scarcely thirty days. Others did expensive damage to the wooden pulleys.

Then the G.T.M.—Goodyear Technical Man – recommended Goodyear COMPASS "30," truly endless belts. On an eighty hour per week schedule the COMPASSES have given first-rate service for periods averaging two years or more!

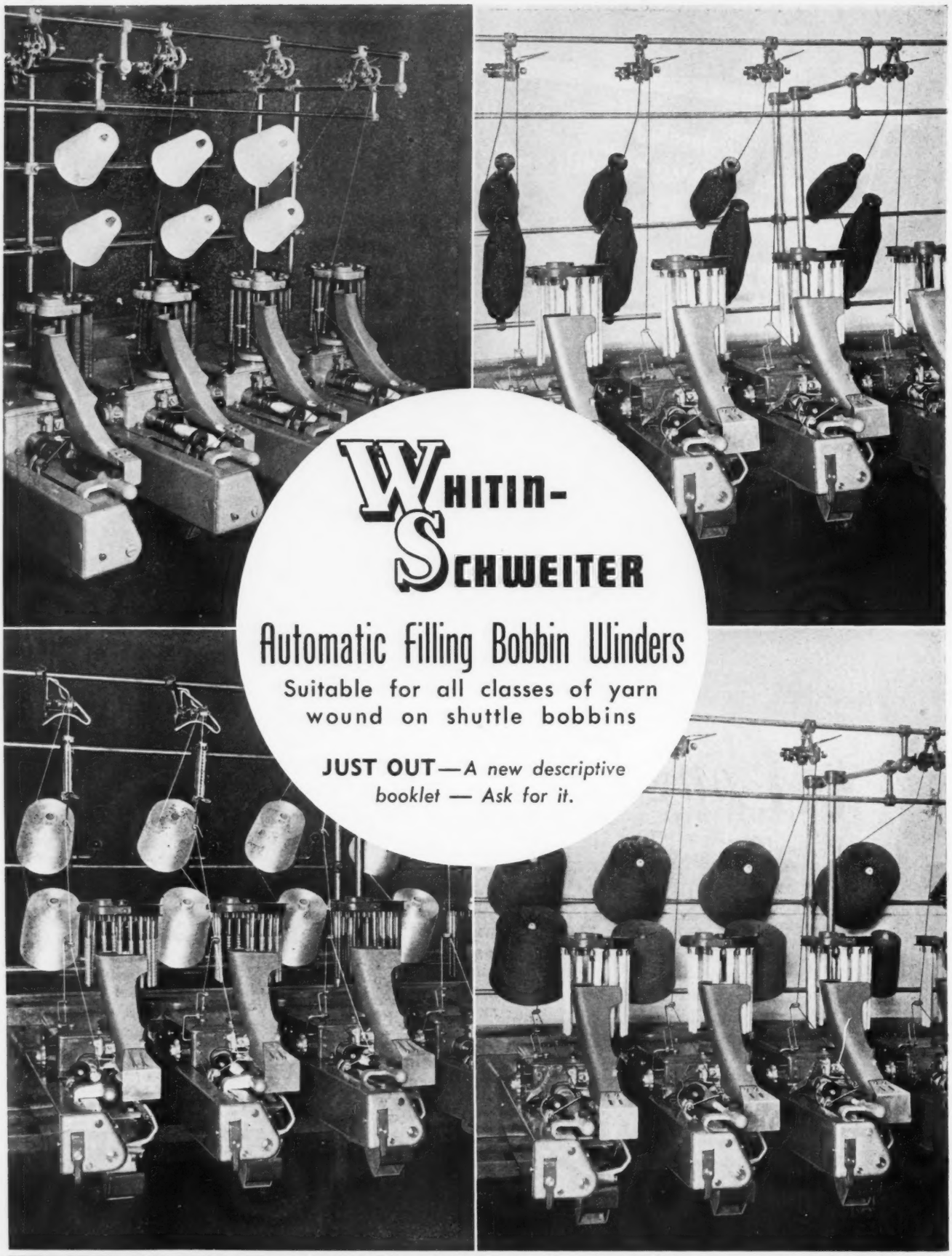
There's a simple explanation for the sensational performance of COMPASS on such difficult drives. COMPASS belts are 25% thinner than others of equal horsepower capacity – insuring far less internal friction, longer flex-life and an ever-tight, speed-holding grip on the pulleys. That's why they succeed where ordinary belts fail. Why not ask the G.T.M. to recommend

COMPASS for your "jinx" drives? A line will bring him to your office. Write: Goodyear, Akron, Ohio or Los Angeles, California – or phone the nearest Goodyear Mechanical Rubber Goods Distributor.

THE GREATEST NAME IN RUBBER

GOODYEAR

Compass—T. M. The Goodyear Tire & Rubber Company



WHITIN-SCHWEITER

Automatic Filling Bobbin Winders

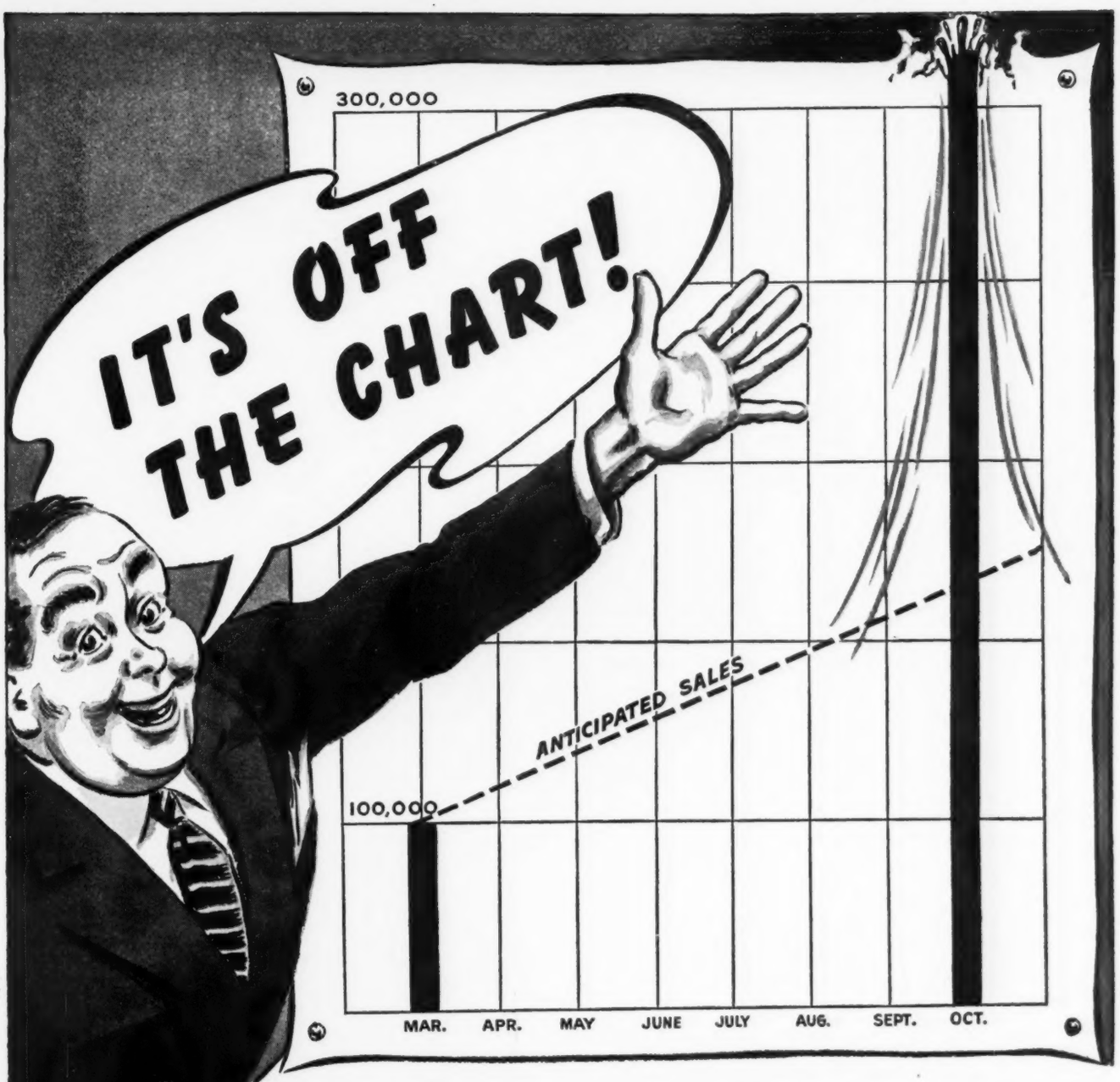
Suitable for all classes of yarn wound on shuttle bobbins

JUST OUT—*A new descriptive booklet — Ask for it.*

WHITIN MACHINE WORKS

WHITINSVILLE, MASS., U. S. A.

CHARLOTTE, N. C. ATLANTA, GA.



NOW 325,000 SPINDLES EQUIPPED WITH ACCOTEX APRONS!

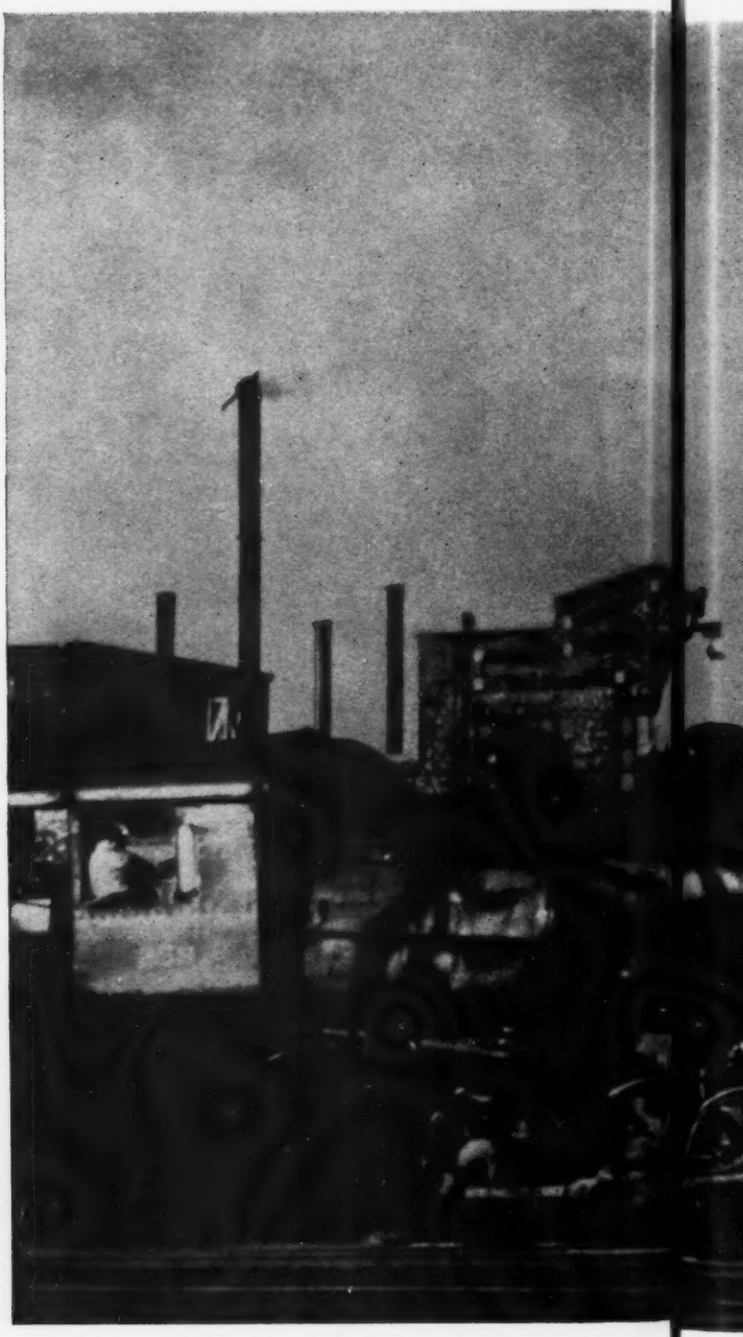
LAST March—when these new, perfected long draft aprons were first generally offered to the trade—only 100,000 test spindles were equipped with them. A normal sales increase was anticipated. But look what happened! Today—7 months later—Accotex Aprons are in use on 325,000 spinning and roving frame spindles!

Armstrong's Accotex Aprons have 6-way superiority over ordinary aprons. They are *seamless—nonstretching—uniform.* They *do not crack or become scuffed* during operation. They *reduce lapping* because they are unaffected by temperature or humidity. And they assure *long life.* In steady use, these aprons have given two years' service without appreciable signs of wear.

See your Armstrong representative for the complete story on Accotex Aprons. Or write Armstrong Cork Company, Textile Products Section, 927 Arch St., Lancaster, Pa.

Armstrong's

ACCOTEX LONG DRAFT APRONS

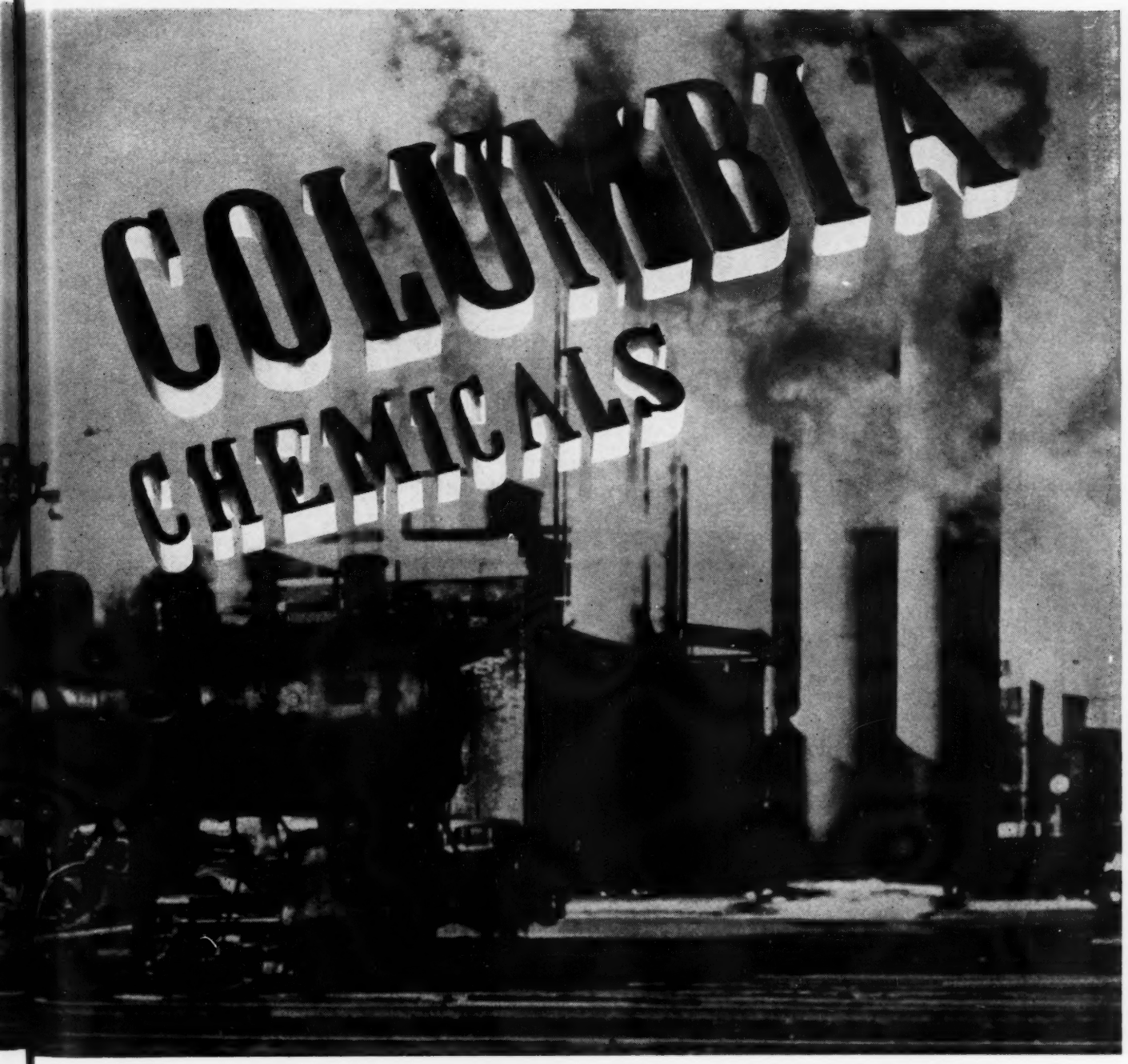


AS IT STANDS TODAY–

Ours is one of the country's largest plants devoted to the production of alkalies and related chemicals. Steps already undertaken will doubtless keep it so for the future.

But the importance of Columbia's progress to today's users of alkalies goes far beyond mere size. Time and again we have taken the lead in supplying these materials in higher, more economical concentration—in raising their purity substantially above previous levels —in devising more effective means for safeguarding these improved qualities up to the moment you use them.

This record is especially important to all manufacturers. It means that you can count on Columbia for chemicals of unfailingly high quality. It means that our Technical Service Department is exceptionally well equipped to help you make the most of available supplies. It means, too, that our forward-looking research program may well prove a fruitful source of replacements for some chemicals that are overworked at present.



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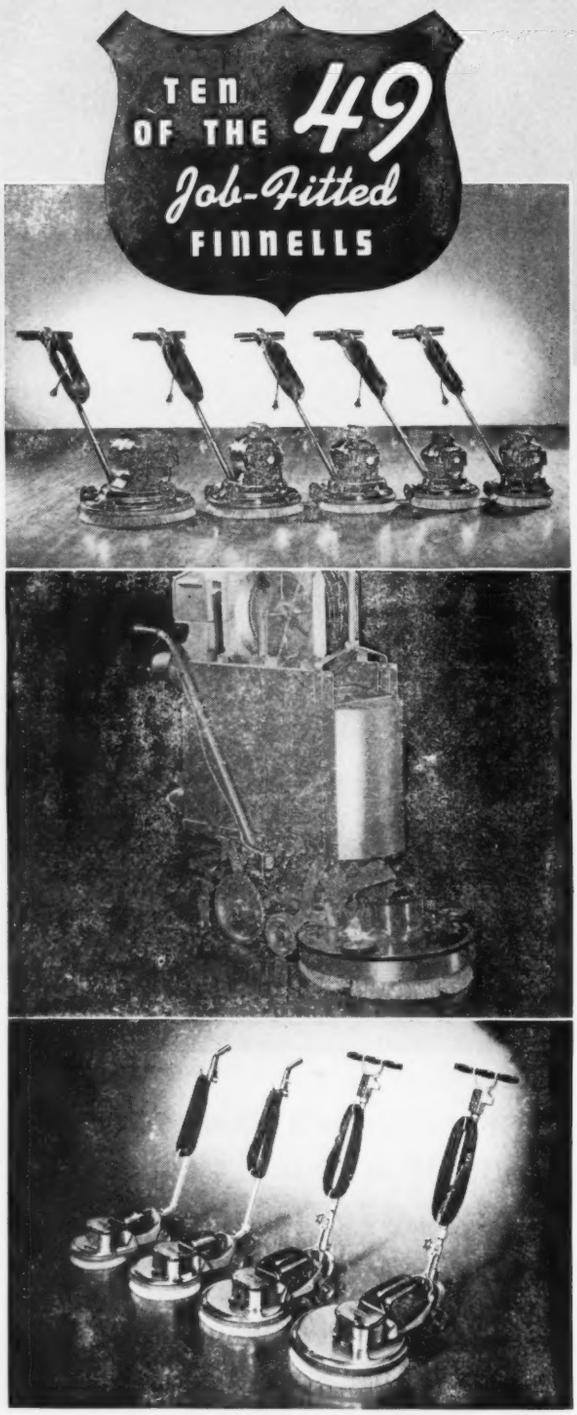
PREPARED

☆☆☆ **TO SOLVE**
Individual
FLOOR-MAINTENANCE PROBLEMS



Floors have individuality, the same as people! And different floors present different problems of maintenance.

Your problem may be a floor that's hard to clean because of narrow spinning machine lanes and weave room alleys . . . or because of low-set furnishings and fixtures. Or, perhaps you have a large open-area floor for which maintenance is too costly under present methods.

Whatever your individual floor-maintenance problem, *Finnell* can help you. With equipment in a range of 49 different models and sizes, *Finnell* is prepared to supply exactly the equipment *you* need for the most efficient and most economical maintenance of your particular floors.

Get the full facts about *Finnell Job-Fitted Equipment.* You will profit by it! For consultation, free floor survey, demonstration, or literature, phone nearest *Finnell* branch, or write Finnell System, Inc., 1911 East Street, Elkhart, Indiana.

FINNELL SYSTEM, Inc.
Pioneers and Specialists in FLOOR MAINTENANCE EQUIPMENT

Assure Uniform Luster and Color in DRYING

Accurate control of drying temperature guarantees better quality and lower costs.

At the Gilt Edge Textile Mills, Inc., New Bedford, Mass., the Non-Indicating Temperature Control installation shown above, automatically maintains correct drying temperature and insures uniform quality, luster and color.

By holding the temperature of can, tenter skein, loop and stock dryers at the desired point, users of these controllers have eliminated problems of "harshness" and "wet spots" resulting from improper drying temperatures. Likewise, substantial savings in steam and increased production have been effected.

The Brown Non-Indicating Temperature Controller is air-operated, employing a one pipe air supply system. It is provided with an adjustable throttling range of 1 to 10 per cent. A calibrated scale permits setting the control point at the desired temperature by a simple turn of the external adjusting knob.

Rugged and dependable . . . operates under extremely adverse atmospheric conditions. Small, compact and easy to install . . . may be mounted adjacent to the control valve if desired.

Write for Bulletin 77-2.

THE BROWN INSTRUMENT COMPANY, 4509 Wayne Avenue, Philadelphia, Pa. Offices in all principal cities. Amsterdam-C, Holland: Wijdesteeg 4—England: Wadsworth Road, Perivale, Middlesex—Stockholm, Sweden: Nybrokajen 7.

BROWN THERMOMETER CONTROLLERS

THE BROWN INSTRUMENT COMPANY, PHILADELPHIA, PENNSYLVANIA

DIVISION OF MINNEAPOLIS-HONEYWELL REGULATOR CO.

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TO MEASURE AND CONTROL IS TO ECONOMIZE

THE RIGHT OIL IN DRAFT ROLL BEARINGS IS

A "Must" for

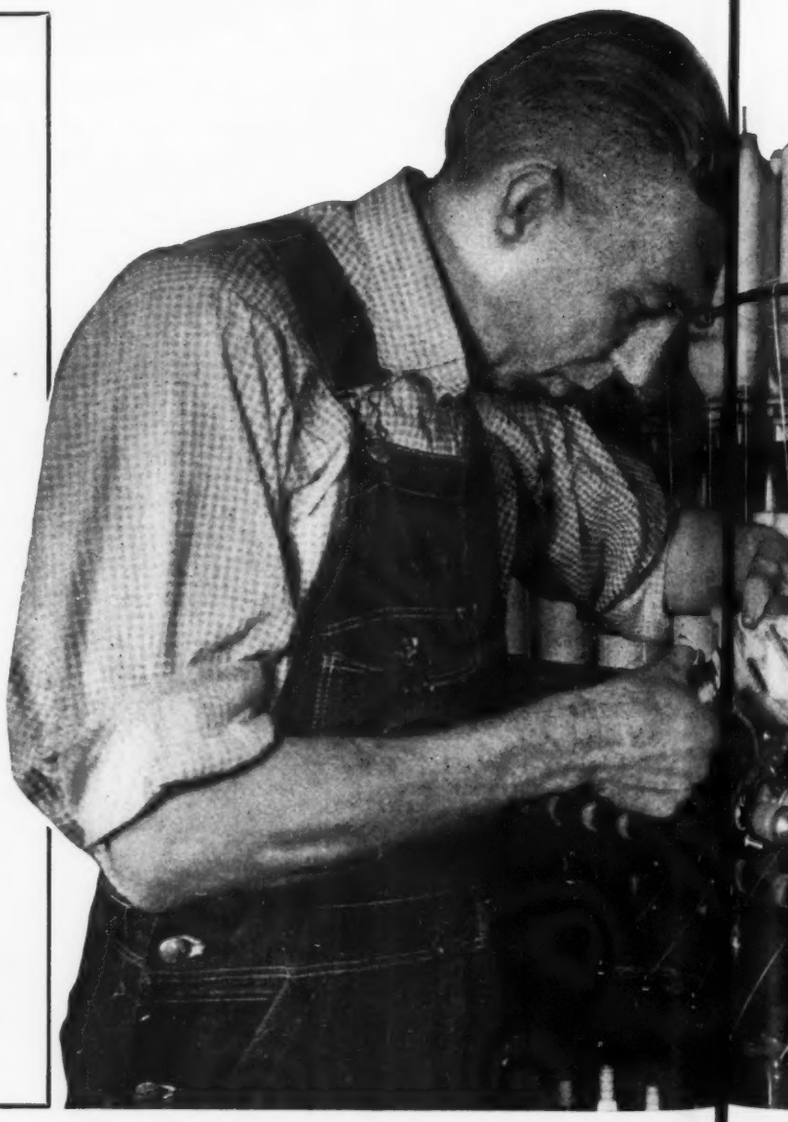
TO PRODUCE high-quality yarn, the setting of draft rolls must be kept accurate...freedom in turning is necessary.

That's where Gargoyle Vactra Oils' film strength and persistence of film fill the bill.

Because of this unique combination of qualities, Vactra Oils minimize friction and wear in draft roll bearings... help maintain accurate settings and freedom in turning.

These oils also permit sparing application...help reduce losses due to staining.

Result — high-quality yarn and economical performance.



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YOU'LL BENEFIT FROM: 75 YEARS' LUBRICATION EXPERIENCE • PRODUCTS APPROVED BY ENGINE BUILDERS •

Quality Yarn!

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The Emblem of
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THE RIGHT OIL FOR EACH JOB • NEW LUBRICANTS AHEAD OF NEW NEEDS •

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Cut your replacement costs!

Over
ONE MILLION
rings with
Vitritex Finish
are now in
Daily Use

PAWTUCKET RINGS Vitritex FINISH

Resist wear — give your travelers long-lived performance

The initial outlay for new rings represents but a part of their *actual* cost. In determining *real* costs, other factors far more important, cannot be ignored. Maintenance, upkeep, length of service and quality of production will either increase or reduce ring costs.

When these points are considered Pawtucket Rings are found to pay for themselves. They are made by an exclusive time-tested process, and with the famous Vitritex Finish. Pawtucket Rings have the hardness of granite, the smoothness of glass—are tarnish resistant and almost impervious to wear.

You can prove these qualities for yourself. We will gladly furnish samples at no charge, from which you can conduct your own tests within your own mill.

GIVE YOUR TRAVELERS "A TURN FOR THE BETTER"

Pawtucket SPINNING RING COMPANY • CENTRAL FALLS, RHODE ISLAND
(Subsidiary of Saco-Lowell Shops)

make more profits WITH yarn dyed FABRICS

131,000,000 people in these United States and no two have the same fingerprints. No two have the same preferences in fabric styles either. Therefore to broaden your market, offer the public a wide latitude of choice.

One thing is certain. If your line includes plenty of yarn dyed fancies, you will make not only more sales, but also MORE PROFIT. The great variety in color and design which colored yarns make possible diverts attention from price to the place where it belongs,—on your CREATIVE ABILITY . . . FRANKLIN PROCESS . . . PROVIDENCE • PHILADELPHIA • GREENVILLE • CHATTANOOGA . . . New York Rep., 40 Worth Street; Chicago Rep., 100 West [illegible]

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★ LARGEST PACKAGE DYERS IN THE WORLD

ASHWORTH PIONEERS IN CARD CLOTHING

LET ONE OF OUR *Practical Card Men* HELP SOLVE YOUR CARDING PROBLEMS

If you have a carding problem you will find one of our service men easy to talk to, because, being a PRACTICAL CARD man, he "speaks your language."

Our service staff is also backed by a manufacturing experience which can be traced to the earliest days of the card clothing industry, by unequalled manufacturing facilities and by modern laboratory equipment.

Since we are PIONEERS in the card clothing industry, a carding problem that is new to you may be old to us. It will cost you nothing to find out.

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★ Southwestern Representative: Textile Supply Co., Dallas, Texas

TECA

TECA, Eastman crimped acetate rayon, is the modern fiber for men's wear...the fiber that energizes a weave, through and through. Teca contributes a rich, worsted-like hand, at the same time is non-irritating. And Teca's crimp has a lively come-back...a springy resistance to sagging and crushing. That's why the demand is growing for Teca Blends in men's suits, in shirts and slacks, in lounging robes.

Eastman

CRIMPED ACETATE RAYON

A. M. TENNEY ASSOCIATES, INC., 10 EAST 40TH STREET, NEW YORK CITY, SALES REPRESENTATIVES FOR THE TENNESSEE EASTMAN CORPORATION, KINGSPORT, TENNESSEE, SUBSIDIARY OF THE EASTMAN KODAK CO.

Parasite!

There it is—that ugly imperfection—eating away at the heart of profits, gnawing into the very vitals of perfect cloth. The causes of the disease? A speck of grime on the operator's finger as he knots a broken end . . . or dirt picked up by any knot present in the yarn delivered to the mill.

Nature's parasites can be removed by treatment and surgery. But not this cloth parasite. It can't be cured, but it can be prevented by eliminating knots and the sources of yarn-breaks—and that is what "continuous process" SPUN-LO RAYON has been able to accomplish. By this process the yarn is spun, bleached, dried, treated and twisted continuously without once being touched by a human hand. As a result, it is virtually free from knots that can break, pull apart or pick up dirt, and from broken filaments that form puff balls and cause yarn breaks and still more knots.

"Uniformity Rides the Reels" is our illustrated booklet describing this amazing new process. Write for your copy.

"Continuous Process"

Spun-lo Rayon

Reg. U. S. Pat. Off.

INDUSTRIAL RAYON CORPORATION • CLEVELAND, OHIO

NEW YORK OFFICE • 500 FIFTH AVENUE

NEW BEDFORD, MASS.
ALLEN
COMPANY

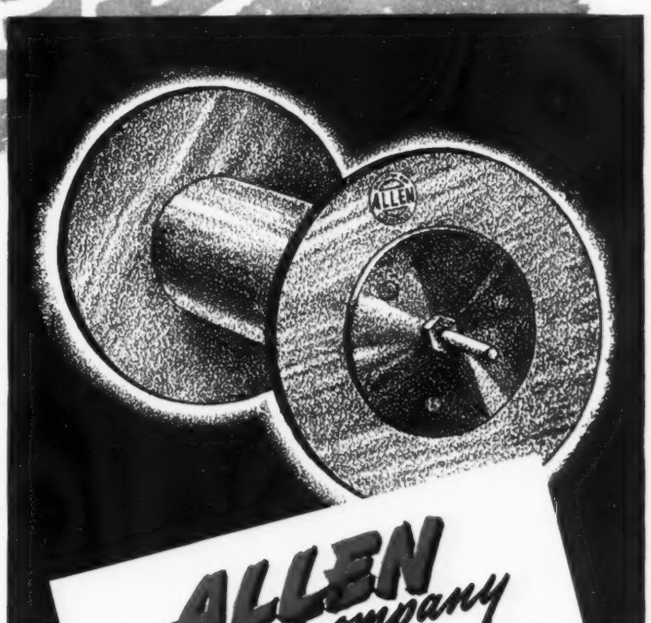
THE MARK OF *Approval*

THE STAMP OF *O.K.*

TRADE MARK REG.

All Warper Manufacturers use Allen Beams for All Speeds

All manufacturers of Cotton Warpers approve of Allen High Speed Cotton Warper Beams and have adopted them as standard equipment. There are *several* reasons *why*:—1. Allen Beams will run at any speed—from 100 to 1,000 yards per minute—and deliver a perfect warp every time. 2. Scientific construction and balancing eliminate any danger of collapsing barrels, breaking heads, or wobbling at any speed. 3. Allen Beams are lighter, easier to handle, because they are made of wood. 4. Allen barrels will not get out-of-round, and Allen Wooden Heads will not chip or splinter under any normal condition. It is a fact that no warp has ever been lost due to failure of any Allen High Speed Cotton Warper Beam.



ALLEN Company

435 RIVER ROAD, NEW BEDFORD, MASS.

Southern Rep., Mr. L. E. Wooten, Fort Mill, S. C.

High Speed Cotton Warper Beams • High Speed Rayon Warper Beams • Loom Beam Barrels
• Adjustable Wooden Loom Beam Heads • Cloth Rolls • Wooden Friction Loom Beam Heads

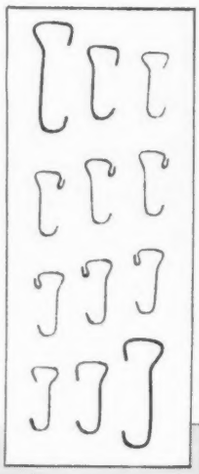
YOU MIGHT SAY THEY ARE

The "first" Line of for UNI

IN SPINNING, TWISTING . . . AND THROWING OF ALL FABRICS

"Two things I want—perfect ring lubrication and freedom from unthreading"

With the adoption of the Vertical Ring (particularly of the lubricating type) in silk and rayon throwing, came the need for *an improved type of Ring Traveler.* The requirements were (1) even distribution of lubricant to the contact surface of the ring. (2) Longer traveler service. (3) Elimination of unthreading when spindle was inactive. The U.S. Improved "NE-BOW" was developed by U. S. research, and meets all conditions perfectly. It will not PIVOT AWAY from the surface of the ring. It materially assists in *drawing out and distributing lubricant*—both of which mean a longer life to the traveler, more even tension and twist. *When the spindle is AT REST, this Traveler LOCKS on the upper outer surface of the ring. This prevents unthreading of the ends (due to the excessive twist in silk and rayon yarns). The new improved "NE-BOW-LIP", shown here also, has a smooth entering edge; and still retains the anti-unthreading feature of the regular "NE-BOW" Traveler.*



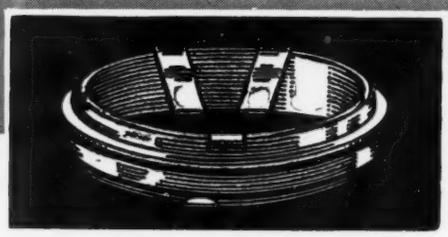
Development of the BEVEL EDGE is typical of U.S. leadership in EVERY department of this specialized field.

When U.S. Travelers reach your mill they are in *perfect condition.* There can be no tampering, no loss in count. The unbroken seal in U.S. Containers GUARANTEES the contents. This is just an added refinement to keep U.S. Service to customers at the highest standard of satisfaction.

SOLD UNDER THESE TRADE NAMES

- *Bowen Round Point Travelers*
- *Bowen Square Point Travelers*
- *Bowen Improved Vertical Bronze*
- *Bowen Patented Bevel Edge*
- *Bowen Patented Ne-Bow Vertical*
- *Bowen Patented Vertical Offset*
- *Bowen Flat Oval and Round Wire Travelers*

Defense FORMITY



"We can't have gripping or binding in . . . twisting cords or plys"

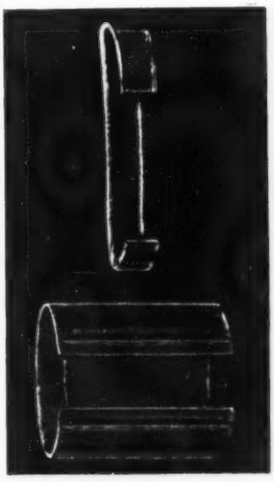
In twisting cords and plys . . . uniformity of twist elongation and increased breaking strength are sometimes all-important factors. So "U.S." developed the Bowen Pat. Vertical Offset Traveler. Based on simple, true mechanical principle, it takes a *diagonal* position in relation to the ring, presenting a bearing surface over the *full width of the traveler.* The result? The prevention of any gripping or binding . . . an *even* tension—an evener rounded product . . . and longer life to the Traveler. *All these U.S. products are made of the highest quality bronze and steel alloys, by modern precision machine tools, and electrically controlled heating equipment, to insure that absolute UNIFORMITY OF QUALITY in metal and temper that spells uniformity in TENSION, that results in uniformity of finished PRODUCT.*

Samples

of U.S. Ring Travelers will be sent you for your own tests—a trial order will go far to convince you of the superiority of U.S. Products. Don't hesitate to ask us any questions regarding the design and use of Ring Travelers on your work.

"The Bevel Edge is the secret of our Smooth, even yarn" . . .

Today ALL first class ring travelers are the product of special stock, modern equipment, carefully controlled hardening methods. In this field, "U.S." has constantly *pioneered* in such production . . . but in addition to all this, offers such superior advantages as the Bowen Pat. Bevel Edge. *It is this beveled edge that enables the swirling of the end, in passing through the Traveler, to produce ideally smooth, even yarn. You'll not find this edge on ordinary types of travelers—you'll find angular edges that FLATTEN the ends, chafe, roughen and split them, make fly waste. The U.S. development of the BEVEL EDGE is typical of U.S. leadership in EVERY department of this specialized field.*



"A TRAVELER FOR EVERY FIBRE"

U. S. RING TRAVELER CO.

PROVIDENCE **RHODE ISLAND**

Amos M. Brown, Pres. and Treas.
SALES REPRESENTATIVES

NEW ENGLAND:
Carl W. Smith, Herbert J. Smith, both c/o U.S. Ring Traveler Co., P. O. Box 1187, Providence, R. I.

MID-ATLANTIC: M. Lee Bolton, P. O. Box 7234, Philadelphia, Pa.

SOUTHERN:
William P. Vaughan, P. O. Box 792, Greenville, S. C.
Oliver B. Land, P. O. Box 158, Athens, Georgia
Torrence L. Maynard, P. O. Box 456, Belmont, N. C.
William H. Rose, P. O. Box 792, Greenville, S. C.

U.S. RING TRAVELER CO.

. . . *in our research and development departments*

With all this talk about oversold markets, yarn shortages, ceilings and priorities, it's hard to imagine a place anywhere in the textile industry where business is going on as usual.

But we have just such conditions in our research and fabric development departments and in the textile unit. Here, you might think you were back in 1937 or ahead in 1947. Here, as always, scientists and technicians work side by side, learning how to produce new and better types of rayon fibers and yarns, and fabricating them into new, more handsome, and more durable types of cloth—assembling facts many of which can't be put into practical use as long as the emergency exists.

We sincerely feel that the new developments which will come as a result of this work will help make the future of America's textile industry even greater than the past. When conditions return to normal, as indeed they will, you may well have cause to be thankful for discoveries made in these very laboratories, where business went on as usual during the emergency.

CROWN TESTED AND APPROVED RAYON FABRIC
TRADE MARK REG. U.S. PAT. OFF.

AMERICAN VISCOSE CORPORATION

SALES OFFICE: 350 Fifth Ave., New York City

World's Largest Producer of Rayon Yarn

SALES OFFICES: New York, N. Y.; Charlotte, N. C.; Providence, R. I.; Philadelphia, Pa.
PLANTS AT: Marcus Hook, Pa.; Parkersburg, W. Va.; Roanoke, Va.; Lewistown, Pa.; Nitro, W. Va.; Meadville, Pa.; Front Royal, Va.

Always off at the gun every Monday morning, DAYCO Roll Coverings take the grief out of winter week-end shut-downs. They eliminate ends down worries and reduce "down" time to the very minimum.

That's because these all-season DAYCOS are engineered and built to thrive on sudden or extreme temperature changes, without flattening, distortion or grooving. Under the rigorous service conditions of the nation's leading textile mills, they have been proved to assure greater production of high standard, uniform yarn for a longer period of time at less cost per month of use.

Install DAYCOS and watch them get off with the gun every Monday morning and keep going, with a year round standard of performance by which all others must be judged.

THE DAYTON RUBBER MFG. CO.
TEXTILE PRODUCTS DIVISION, Dayton, Ohio
The Originators and Pioneers of Dayco Tempered Roll Coverings

GREENVILLE SALES OFFICE
Woodside Building . . . Greenville, S. C.

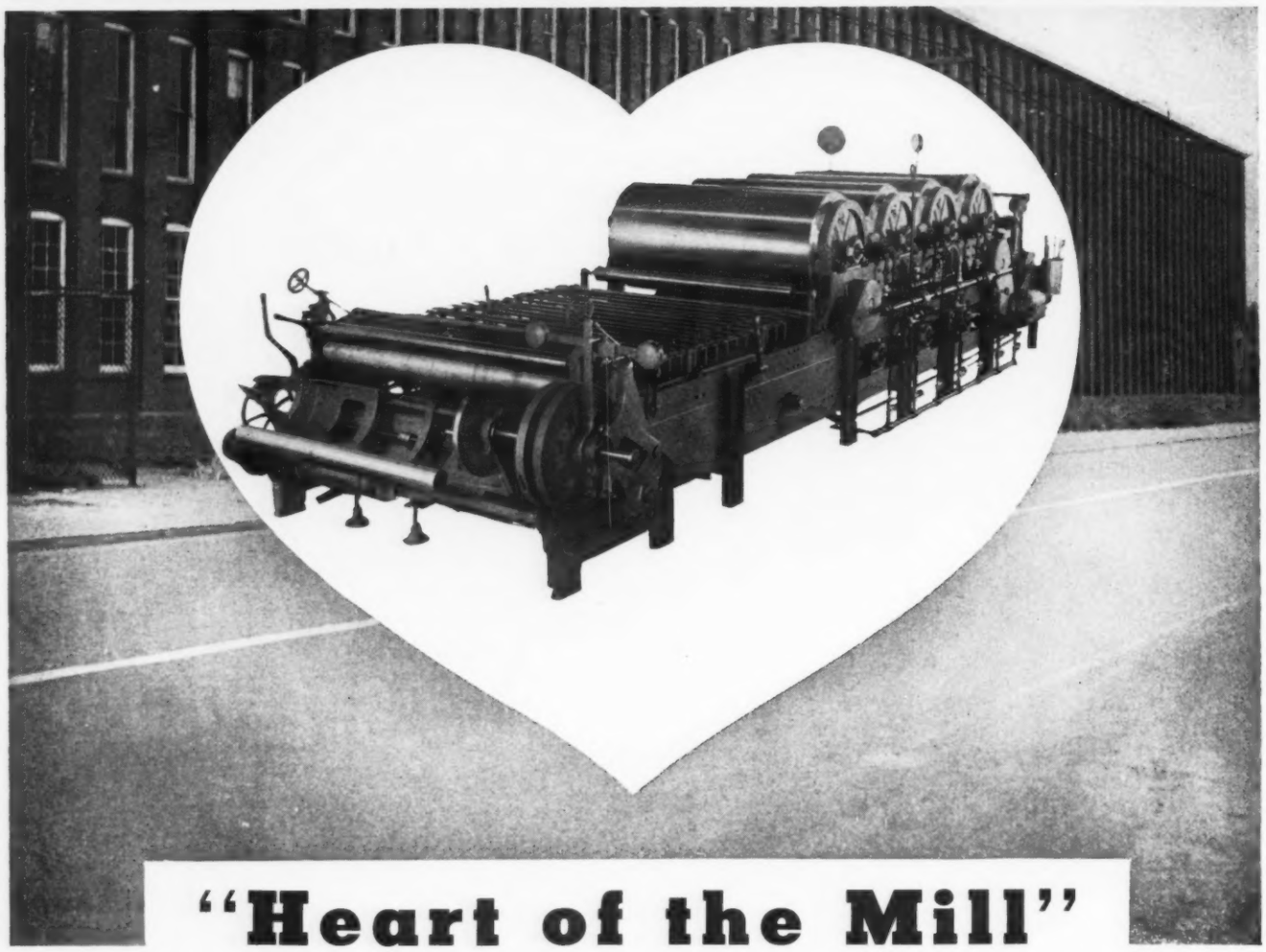
EXPORT DIVISION
THE DAYTON RUBBER EXPORT CO.
38 Pearl Street, New York, N. Y., U. S. A.

HERE'S WHY—
DAYCO TEMPERED ROLL COVERINGS ARE THE No. 1 CHOICE OF AMERICA'S TOP-FLIGHT TEXTILE MILLS

1. Improved drafting.
2. No grooving—less ends down.
3. Unaffected by temperature changes.
4. Lower net roll costs.
5. Long service life.
6. Easy to apply.
7. Proper cushioning.
8. Not affected by hard ends.
9. Static free.
10. Oil resisting.
11. One piece tubular construction.
12. Produce more uniform yarn.

Dayton
***Thorobred* TEXTILE PRODUCTS**
Dayco TEMPERED ROLL COVERINGS—LOOM SUPPLIES
MADE BY THE WORLD'S LARGEST MANUFACTURER OF V-BELTS

Copyright, 1941, The Dayton Rubber Mfg. Co.



"Heart of the Mill"

"Your sizer is the heart of our mill" the general manager of a New England mill told us recently. Johnson Rayon Warp Sizers do indeed supply the continous flow of perfectly sized warps that are the life-blood of efficient textile production.

These finest of sizers are built to function perfectly, around the clock if necessary, at speeds up to 100 yards a minute or more if required, with unexcelled uniformity in product and a minimum of manual labor.

JOHNSON RAYON WARP SIZERS

—are now equipped with Automatic and Semi-Automatic devices, such as the Automatic "Stretch Indicator and Finger-Tip Control of Stretch", Size Level and Size Temperature Controls, and similar devices for better sizing.

Send for 12 page illustrated booklet that gives all the reasons why leading mills pronounce Johnson Rayon Warp Sizers the heart of their mills.

CHARLES B. JOHNSON MACHINE WORKS

PATERSON **NEW JERSEY**

Representatives in New England and Canada:
J. S. Fallow & Company
New Bedford, Mass.

Unisel Ltd.
Manchester, England

Representatives in the South:
Carolina Specialty Co.
Charlotte, N. C.

WHEN RAYON WAS NEW

The reason for Tubize acceptance is quite understandable. It is due to a carefully planned policy over a period of years. It has grown slowly but surely.

Way back in 1933, when rayon did not have the quality or acceptance that it now has, Tubize began to test fabrics made of Tubize Rayon and to advertise garments made of these tested fabrics to the consumer.

The Tubize Label signifies not only that a fabric is made of a rayon yarn of quality; it also stands for the added fabric qualities that the weavers are putting into fabrics made of Tubize Rayon.

The Tubize name on a garment has therefore come to mean an extra assurance of the basic service qualities that women want and expect.

TUBIZE *certified quality* RAYON

TUBIZE CHATILLON CORPORATION • 2 Park Avenue, New York

Viscose and Acetate Rayon Yarns and Fabrics

A Warship With Sails

and Forced Draft Fans!

BELIEVE IT OR NOT, that's what the U. S. S. Alliance had in 1886! Boilers—equipped with Sturtevant forced draft fans. Sails—used principally to save coal at cruising speeds.

Here was the *first* extensive test of forced draft on a United States warship. And with sensational results!

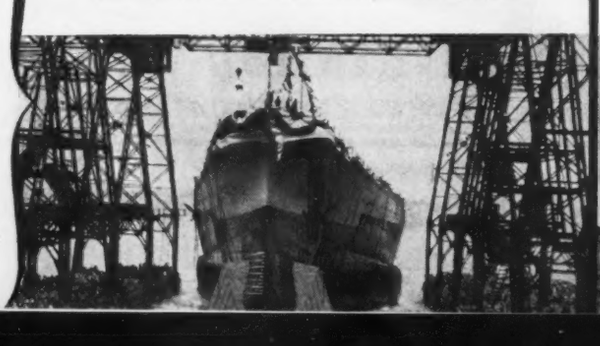
Two of the Alliance's six boilers were eliminated. Coal carrying capacity—increased 40 tons. Boiler power stepped up 50 per cent. And sails finally eliminated from *all* United States warships!

Today Sturtevant forced draft fans and other marine equipment are still playing a vital role in defense. This equipment, in various forms, is installed on a majority of U. S. Navy vessels now in service—will be installed on a majority of these ships now on the ways.

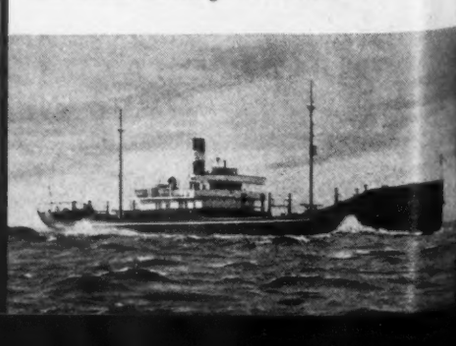
The list of other Sturtevant-equipped ships is almost endless. Famous American passenger fleets—ships that ply our inland waterways—

Sturtevant
Puts Air to Work
in the
Marine Industry

U. S. Navy—Recently launched U. S. S. Massachusetts, one of largest U.S. battleships, equipped with Sturtevant draft fans, heaters, ventilators, exhausters, auxiliary steam turbines.



Colliers—Four passenger-carrying Colliers of Pocahontas Steamship Co. are Sturtevant-equipped to eliminate the nuisance of fly-ash and cinder discharge from stacks.



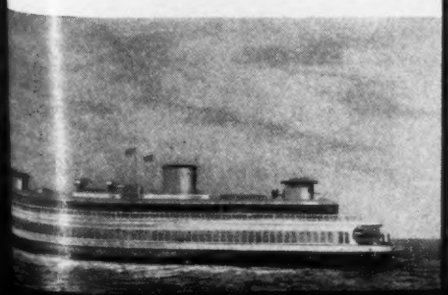
merchantmen of the gigantic Maritime Commission program — cargo vessels and tankers that are holding the life-lines to Britain and her Allies.

B. F. STURTEVANT COMPANY
Hyde Park, Boston, Mass. *Branches in 40 Cities*
B. F. Sturtevant Company of Canada, Ltd., Galt, Toronto, Montreal

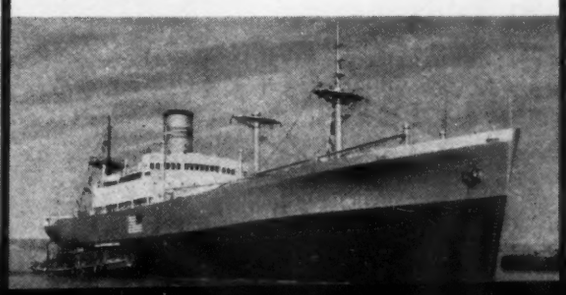
Sturtevant
REG. U. S. PAT. OFF
Puts Air to Work

STURTEVANT — FOUNDER OF THE AIR HANDLING INDUSTRY

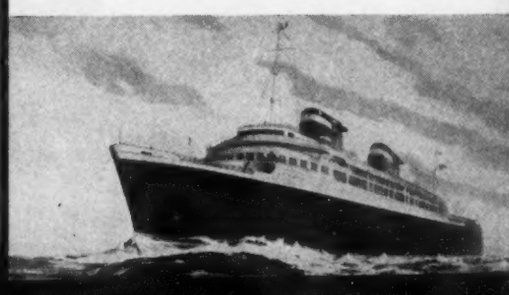
...rries—Every ferry boat of the famous City New York fleet is equipped with Sturtevant ...tilating Fans and Forced Draft Blowers.



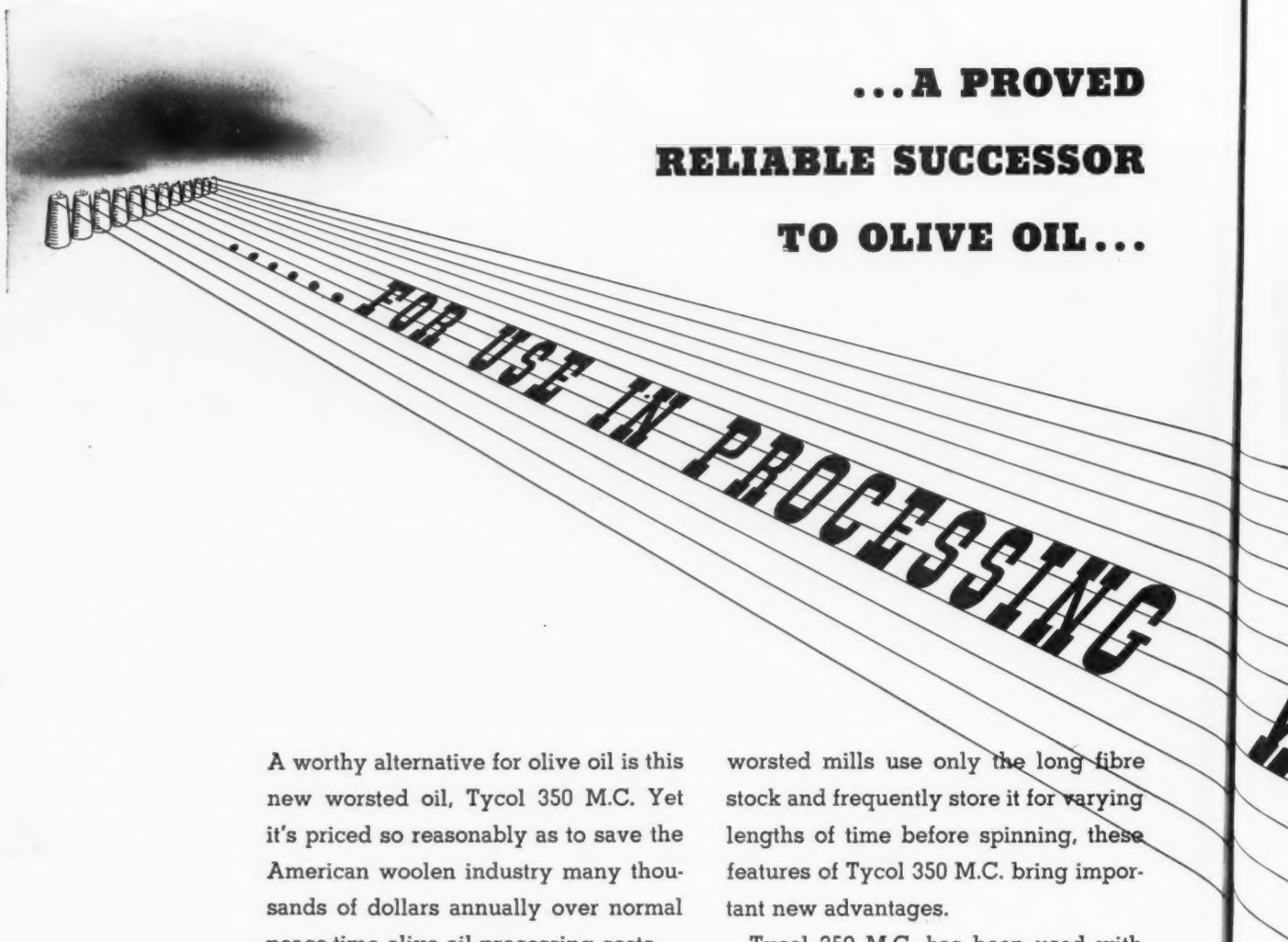
Cargo Ships—Alcoa Pathfinder and 5 sister Cargo Vessels — built under America's merchant shipbuilding program — are Sturtevant equipped.



Liners—Largest U.S.-built passenger ship is Sturtevant-equipped former S.S. America — now in U. S. Government service and renamed the "West Point".



NOW AVAILABLE TO



...A PROVED RELIABLE SUCCESSOR TO OLIVE OIL...

...FOR USE IN PROCESSING

A worthy alternative for olive oil is this new worsted oil, Tycol 350 M.C. Yet it's priced so reasonably as to save the American woolen industry many thousands of dollars annually over normal peace-time olive oil processing costs.

Compounded with the finest mineral oil base, Tycol 350 M.C. protects fibres against breakage during carding, combing, drawing and spinning operations—yet is readily removable from the fabric. Tycol 350 M.C. possesses unusual stability, resists tendencies to become rancid and to oxidize on aging. Since worsted mills use only the long fibre stock and frequently store it for varying lengths of time before spinning, these features of Tycol 350 M.C. bring important new advantages.

Tycol 350 M.C. has been used with outstanding success by several of the largest worsted mills. We invite you to subject this to any tests pertinent to your manufacturing operations. Cooperation from our textile engineers is freely offered. Full details may be obtained by writing the Tide Water Associated Oil Co., 17 Battery Place, New York, N.Y.

TIDE WATER ASSOCIATED

Regional Offices: Boston, Philadelphia, Pittsburgh, Charlotte, N. C.
EASTERN DIVISION
17 BATTERY PLACE NEW YORK, N. Y.

THE TEXTILE INDUSTRY

OIL COMPANY

INDUSTRIAL TYCOL OILS-GREASES

Tycol 350 M.C. Worsted Oil conforms to Specifications P-1 and C-1 of the National Association of Wool Manufacturers.

The Makers of Aridye Announce Aquadye

Now the Excellent Printing Qualities of Aridye Pigment Colors Are Available with Soluble Dyestuffs

The makers of Aridye* are happy to announce Aquadye* printing pastes which give to soluble dyes the fine printing qualities associated with Aridye colors.

The Aquadye method has the particular advantage of a soundness of mark and a levelness that is especially noticeable on blotches. Sharper prints may be made even from shallower engravings so that savings in color cost may be effected. A stream of water readily removes the color from engravings, color boxes, tubs and screens.

If the goods are washed to develop the color experience has indicated less letdown and a greatly reduced tendency to staining of the ground, resulting in whiter white areas on Aquadye prints.

Rapidogen-type colors in the Aquadye medium have been printed on cotton and rayon dress goods, flannelette, table cloths and handkerchief cloth, by both machine and screen. Experimental runs have shown the Aquadye method suitable for use with stabilized vat dyes, and with direct and acid dyes, as well as with alizarins.

Aquadye makes available a printing medium entirely compatible with Aridye pigmented emulsions. Preparatory work and aftertreatment are reduced to a minimum. Flannelette can be printed without renapping. Tinted grounds which will not stand washing may be overprinted by the Aquadye method. Dark blotches may be overprinted on pastel grounds to produce the effect of discharge printing.

Let us tell you about the new possibilities in the Aquadye method. Licenses are now being offered to finishers.

**Trade Mark—Reg. U. S. Pat. Off.*

a new method of textile printing employing an organic medium for soluble dyes

Aquadye

EMULSIONS MAY BE USED WITH THE FOLLOWING BRANDS OF DYESTUFFS:

RAPIDOGENS* DIAGENS*
PONSOLS* PHARMASOLS*
INDIGOSOLS* ALGOSOLS*

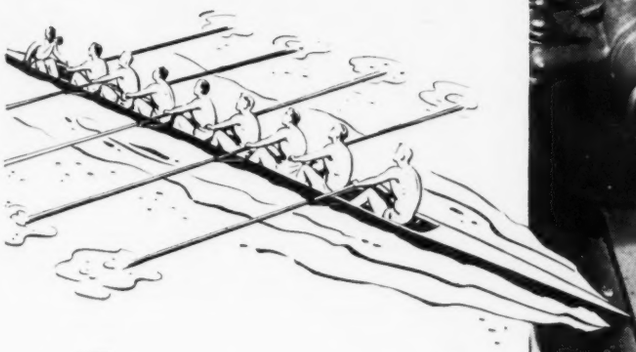
AND WITH ALIZARINS AND MOST OTHER WATER-SOLUBLE DYES

ARIDYE CORPORATION · A Subsidiary of Interchemical Corporation · FAIR LAWN, NEW JERSEY

You Pay the Same for Power - - Delivered or Dissipated!

MATCHED QUALITY

OF DODGE "D-V" DRIVES GIVES YOU



Speed and Stamina . . . FOR TODAY'S PEAK DEMAND OR TOMORROW'S NORMAL NEEDS

Now . . . when industry is straining to get peak production . . . Dodge "D-V" Drives are proving their mettle. They match the speed of the hour — but in addition, provide a reserve of ruggedness which means less maintenance not only now, but for the day when the pace of production again returns to normal.

Put Dodge "D-V" Drives on your production machines now — Their "Matched Quality" means properly designed and accurately built sheaves with the required number of V-Belts selected because of their suitability for power transmission service.

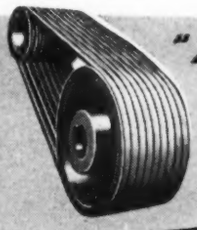
Dodge "D-V" Sheaves are carefully machined — groove diameters are uniform — each belt pulls its full load — no loafing belts — "D-V" Belts have concave side walls so that the sides provide a perfectly straight surface in contact with the grooves.

Try Dodge "D-V" Drives — they give you Double Value.

DODGE MANUFACTURING CORPORATION
MISHAWAKA, INDIANA, U.S.A.

DODGE "D-V" DRIVES OFFER

- Constant speed ratios easily maintained at all speeds.
- Transmits full power — no loss through slippage.
- "D-V" Belts have concave side walls so that the sides provide a perfectly straight surface in contact with the grooves.



"Matched Quality" FEATURES

- Complete modern power transmitting unit backed by one responsibility.
- Sheaves are carefully machined — groove diameters are uniform.
- Dodge "D-V" Drives are clean and noiseless — requiring no lubrication of any kind — consequently damage to work due to oil leakage or throwing of lubricant is eliminated.

DODGE
MISHAWAKA
Power Transmission

THE RIGHT DRIVE . . . FOR EVERY JOB

L. F. Dommerich & Company

Executive and General Offices

271 MADISON AVENUE
NEW YORK, N. Y.

Telephone: AShland 4-8650

FACTORS

For Manufacturers and Merchants

Inquiries as to our services solicited

●

ESTABLISHED 1840

YE OLDE TORRINGTON ALMANACK

Thirty Days Hath NOVEMBER

☛ NOVEMBER was the NINTH month on the old Roman calendar and was thus named because NOVEM is the Latin word for NINE. November is the month for REJOICING and the showing of GRATITUDE for the BLESSINGS brought by the summer. Now the clan gathers about the FESTIVE BOARD; cool and mellow is the CIDER in the jug—and the VOICE of the TURKEY is heard in our land. This is the month to gird your loins for the battle with OLD MAN WINTER. Nature made the November air brisk and sharp, the better to HONE the EDGE of your SPIRIT and smite the OLD WRETCH hip and thigh.

In November the Zodiacal sign of SAGITTARIUS, the Centaur with the bow and arrow, rises to ASCENDENCY in the sky. People born under this sign are called SAGITTARIANS and reflect the characteristics of the type. They are bold, fiery and ENERGETIC in early life, but usually become sedentary and PHILOSOPHICAL much sooner than other folks. Many people consider them LUCKY and envy them for this reason, since it is easy for a Sagittarian to ACHIEVE SUCCESS through his TREMENDOUS ENERGY in his youth, and yet retire to a life of PEACE AND QUIET in a cottage without regret while still in his MIDDLE AGE. In their old age, Sagittarians are often ADDICTED to such games as chess and checkers, some of them to such an extent that they are unable to cross a parquet floor without ZIGZAGGING. Sagittarians are thoroughly RELIABLE at all times and can be depended on to give a GOOD ACCOUNT of themselves in whatever they undertake. They make good military tacticians, garage mechanics, merchandising managers, politicians, publicity agents and as we said before—chess players.

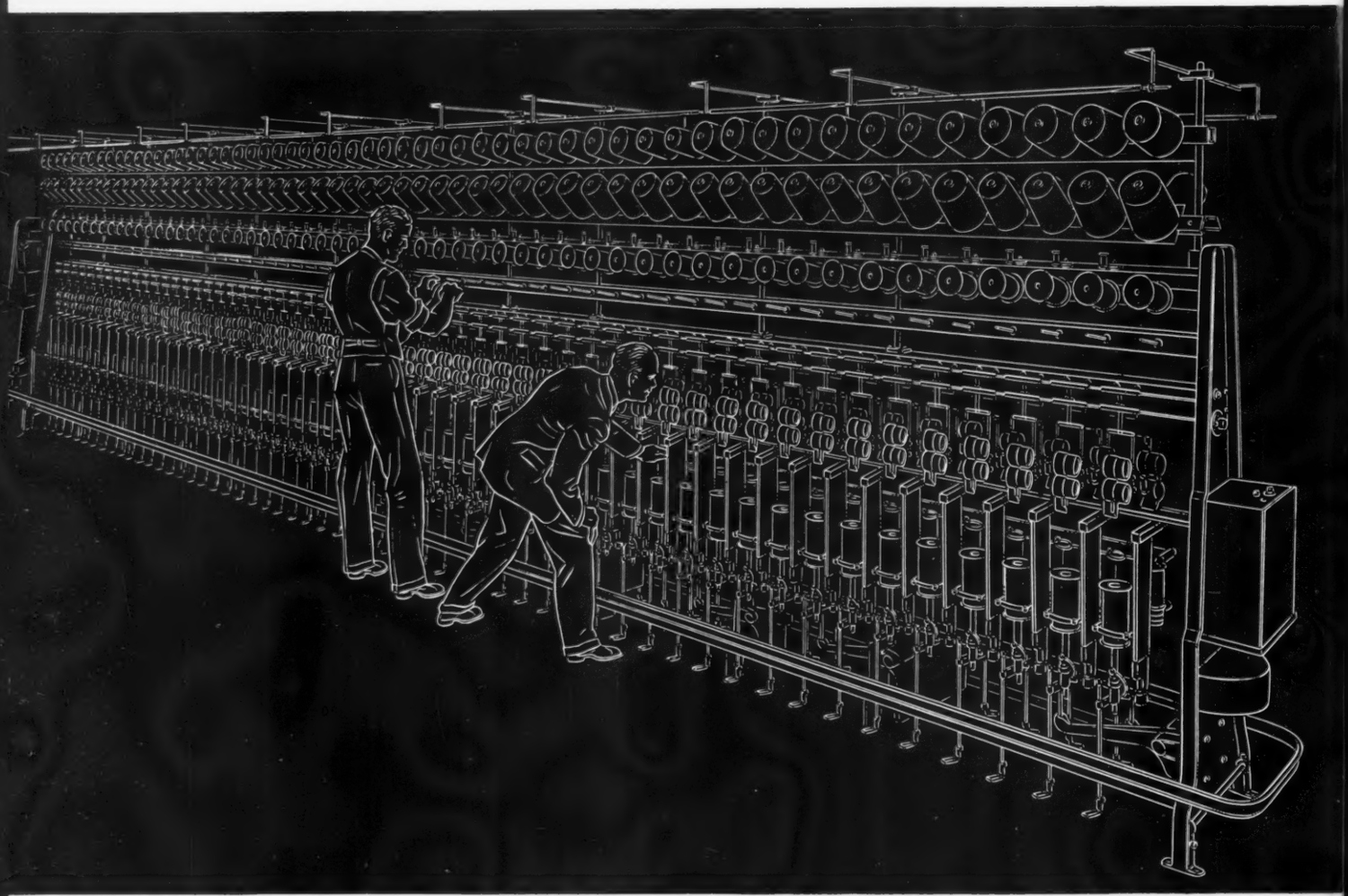
ASTROLOGICAL COUNSEL for Sagittarians in the KNITTING INDUSTRY: If you are YOUNG, you are probably going places fast. If you are of MIDDLE AGE or OLDER you have probably gone places fast. In either case, you are KEEN and SAGACIOUS enough to know the value of using the knitting needles in the RED AND GREEN BOX—the famous TORRINGTON box. You will be doing a FAVOR to your mill and to others who work in it if you INSIST on needles from THIS BOX—for Torringtons are the MACHINE-MADE needles and they are a constant source of ECONOMY and EFFICIENCY in knitting. It is in your horoscope that if you hitch your WAGON to the TORRINGTON STAR you are sure to keep your knitting standards high ... Order TORRINGTONS always. ☚

TORRINGTON LATCH NEEDLES

THE TORRINGTON COMPANY, TORRINGTON, CONN., U. S. A. ESTABLISHED 1866

Branches: New York • Philadelphia • Chicago • Boston • Greensboro, North Carolina • St. Louis • Toronto
Factories at: Torrington, Conn. • Orange, Mass. • Bedford, Quebec • Coventry, England • Aachen, Germany

What Improvements would you ask for IN A TWISTER?



SUPERINTENDENTS want a machine that will give increased output, fewer production halts. Sales managers want equipment with features that assure quicker deliveries. Purchasing agents want the most machine for the money. Machinery builders want to incorporate construction that gives extra satisfaction.

You can gain whichever of these advantages mean the most to you—with equipment using profit-building Torrington Needle Bearings.

Anti-friction Needle Bearings frequently permit substantially higher operating speeds, more output, lower power costs. Their high load capacity results in long bearing life. The close-fitting lips of the Needle Bearing race help to reduce service attention and expense by holding large supplies of lubricant and by excluding dust and lint.

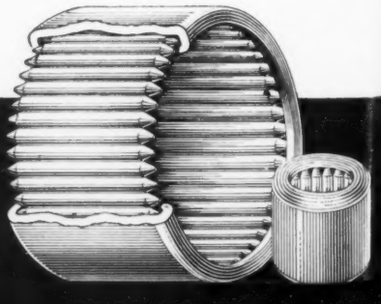
And if you are a machinery manufacturer, there are still further advantages—the compact Torrington Needle Bearing costs little; it is often adaptable to existing machine designs; it is easily installed.

For more detailed information on the Torrington Needle Bearing, write for Catalog No. 116. For Needle Bearings for heavier service, write our associate, Bantam Bearings Corporation, South Bend, Ind., for Booklet 104X.

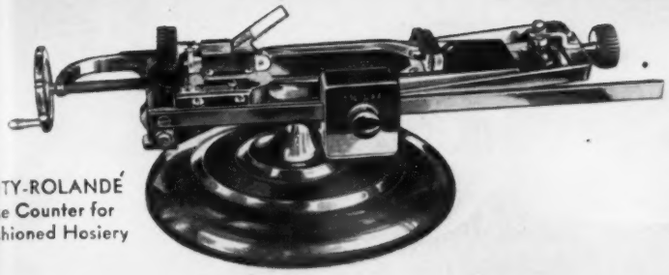
THE TORRINGTON COMPANY · *Established 1866* · **TORRINGTON, CONN., U. S. A.**

Makers of Needle and Ball Bearings

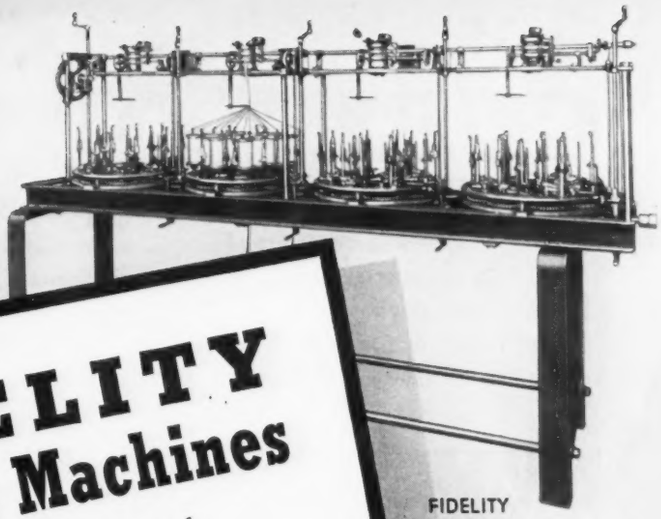
New York Boston Philadelphia Detroit Cleveland Chicago Los Angeles London, England



TORRINGTON NEEDLE BEARING



ELITY-ROLANDÉ
ourse Counter for
Fashioned Hosiery



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FIDELITY Textile Machines

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Uniform High Quality—in Quantity

Real output is salable, fully acceptable merchandise—. Seldom reached to the point of 100%. FIDELITY MACHINES help management keep the percentage of *real* output high, because they are simple to run, are so designed as to reduce unnecessary physical effort to the minimum. Easy to maintain in top working condition.

Here are machines to back you up in your defense and regular production schedules.

Write for new bulletins on the machines illustrated here.

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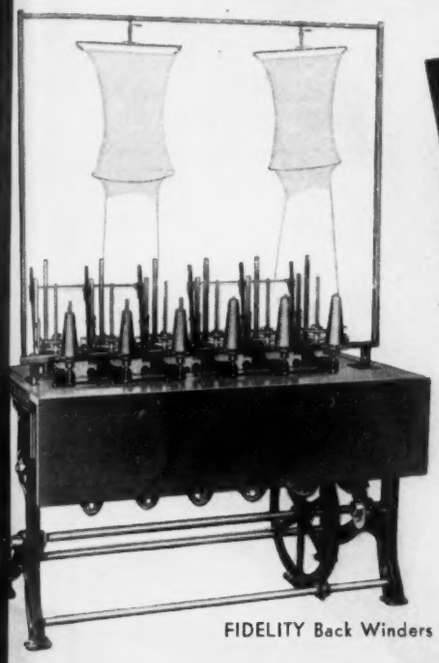
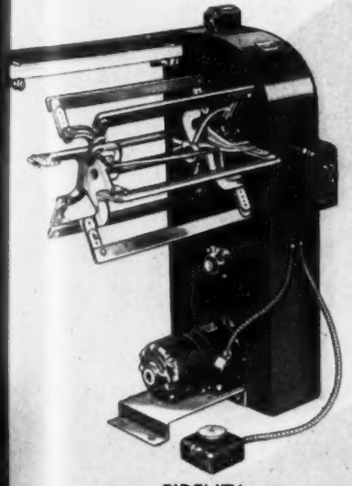


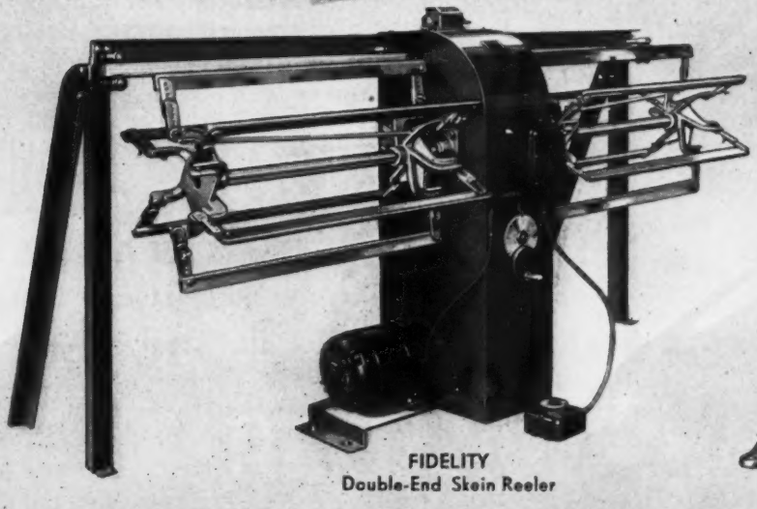
FIDELITY Back Winders

FIDELITY
Pocket Edge
Folding Machine

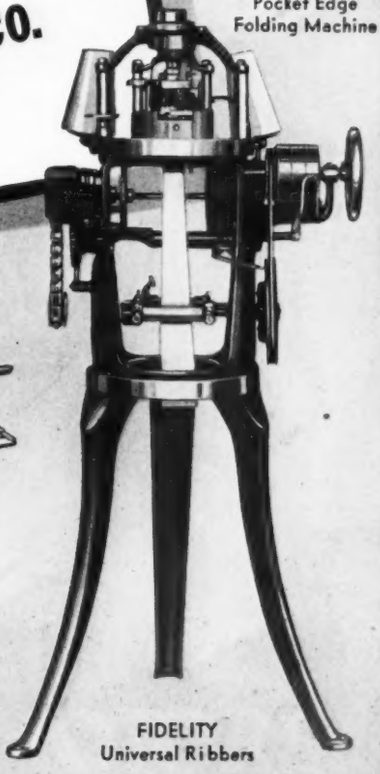
FIDELITY Jumbo
Bobbin Winder



FIDELITY
Single-End Skein Reeler



FIDELITY
Double-End Skein Reeler



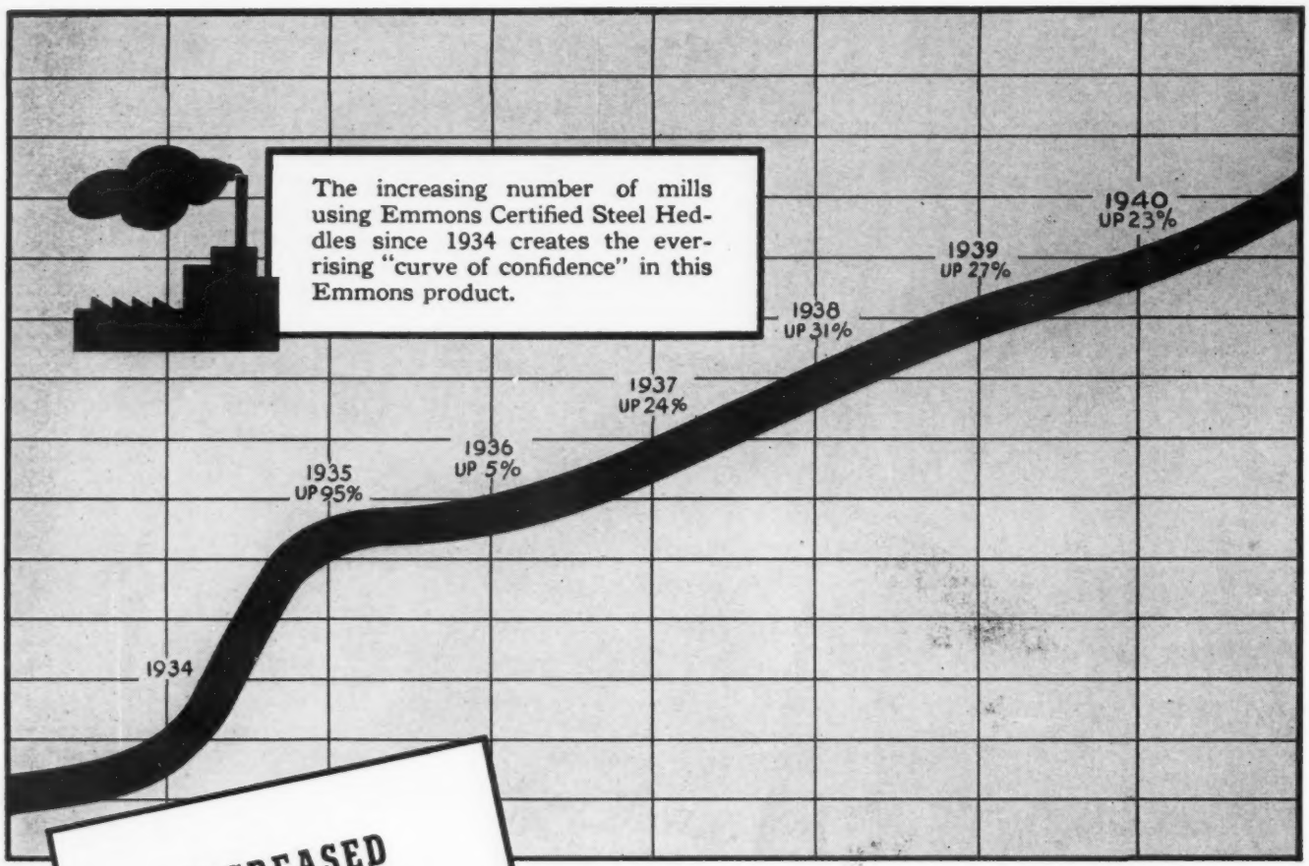
FIDELITY
Universal Ribbers

FOLLOW THE EMMONS

CURVE OF CONFIDENCE

Note the ever increasing number of mills buying Emmons Certified Steel Heddles! Consider the reason: consistently good performance, based upon rigid *quality control* in manufacture.

From choice of metal to the extra operations which streamline the heddle eye, Emmons inspectors watch every step, giving a final examination before attaching the "Inspected and Approved" seal. Then a famous outside Testing Laboratory buys samples in the open market and tests them for durability, corrosion-resistance, and smoothness of eye. Here's a basis for buying that you, too, can rely on!


The increasing number of mills using Emmons Certified Steel Heddles since 1934 creates the ever-rising "curve of confidence" in this Emmons product.
1934
1935 UP 95%
1936 UP 5%
1937 UP 24%
1938 UP 31%
1939 UP 27%
1940 UP 23%

INCREASED DISTRIBUTION

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Emmons products, including standard sizes of flat heddles, are stocked in Charlotte and Atlanta. Emmons Reeds are manufactured in Charlotte.

This Inspected and Approved Seal builds confidence for *all* Emmons products, including
"Multiple Air Space" Reeds
"Chafeless Cord" Cotton Harness
Heddle Frames.

Get the most from your loom harness equipment! This free booklet is filled with money-saving hints for your mill. Write for it today!

EMMONS

LOOM HARNESS COMPANY

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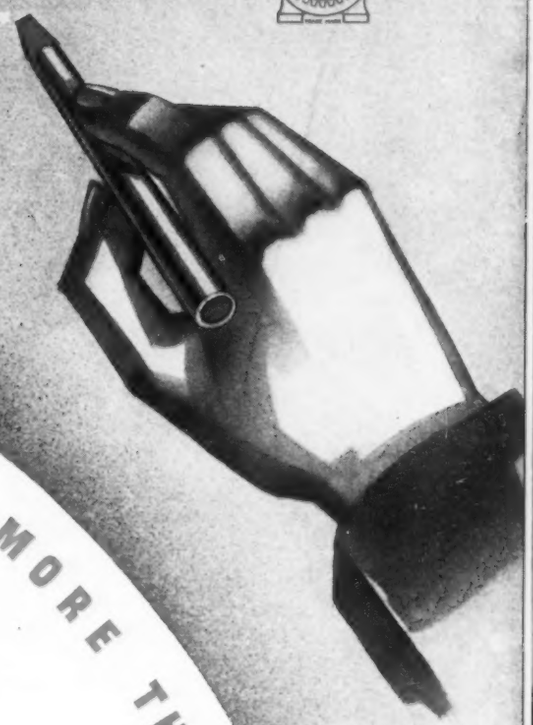
SEE LATEST TEXTILE WORLD YEARBOOK FOR DETAILS ON ALL EMMONS PRODUCTS

THESE 2 WORDS DO MEAN SOMETHING

RELIANCE ELECTRIC AND ENGINEERING COMPANY



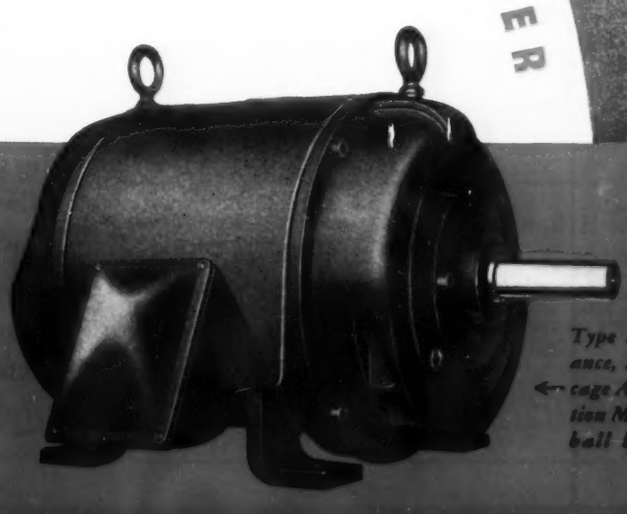
MOTOR-DRIVE IS MORE THAN POWER

When these two words were included as part of our corporate name thirty-two years ago, we were pioneering with an idea that has been a major factor in a steady business growth. We were showing people how to apply adjustable-speed motor-drive to get more production from metal-working machinery.

Today, this idea has broadened to include many industries. Reliance men trained to think of motor-drive in terms of production are being invited to sit in and help answer the question, *"What can we get the motor to do besides supply power?"* We haven't all the answers in a book, but we know enough of them to help run down others . . . Yes, we have motors — and we also have ideas that make motor-drive *more than power.* Why not use them?

RELIANCE ELECTRIC & ENGINEERING COMPANY
1088 Ivanhoe Road • • • • Cleveland, Ohio

Type T Heavy-duty Reliance Motor for direct current; ball bearings.



Type AA Reliance, Squirrel-cage A-c. Induction Motor with ball bearings.

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PITTSBURGH • PORTLAND (ORE.) • ST. LOUIS • SAN FRANCISCO
SYRACUSE (NEW YORK), AND OTHER PRINCIPAL CITIES

RELIANCE A-C D-C MOTORS

"Excess HUMIDITY is our *worst enemy.*

Sure, it ends static, but at what a price! *Costly* humidification, and inefficient, unhealthy working conditions!"

"Yes, but STATIC is even worse!

Slow starting of cards, *uneven* yarns, and a lot of *troubles* that *waste* our time and spoil our quality!"

Why Fight About It? Avoid Both Static and Excess Humidity with

CHAPMAN STATIC NEUTRALIZERS

This simple, readily-installed equipment is guaranteed to remove static electricity *instantly, scientifically,* regardless of temperature and humidity. *16,000 are now in use,* 8,000 in textile industries.

Chapman Static Neutralizer is *safe, free from shock*—on List of Inspected Electrical Appliances of Underwriters' Laboratories, National Board of Fire Underwriters.

For more facts—experiences of users—or a trial installation, write today to the sole sales agents: *Kidder Press Company Inc.,* Dover, N. H.; Chrysler Building, New York; Fisher Building, Chicago. On Pacific Coast: H. W. Brintnall Company, 430 Howard St., San Francisco.

TO PRIMARY DEFENSE PLANTS AND IMPORTANT SUBCONTRACTORS:

othing less than this Proven and Guaranteed uorescent lighting system will do today

IVANHOE
"50 & 100 FOOT CANDLERS"
RLM *Continuous Wireway* FLUORESCENT LIGHTING SYSTEM

IVANHOE "50 & 100 FOOT CANDLERS" will give you the new, higher illumination you need...30 to 50% lower installation costs... faster installation...simplified maintenance

ILLUSTRATION—PRATT & WHITNEY WORKS FULL SCHEDULE ON DEFENSE ORDERS

ILLER-IVANHOE STALLATIONS

ingfield Armory • Frankford enal • Curtiss-Wright Corp. Grumman Aircraft • Republic ation Corp. • Fairchild Avia- n • DuPont Company • East- n Kodak Co. • Hercules der Co. • Liberty Aircraft ducts • Uxbridge Worsted • Sperry Gyroscope Co. • ger Engineering Co. • Pratt Whitney • United American ch • New York Shipbuilding Combustion Engineering • The Austin Co.

•

nly IVANHOE "50 & 0 FOOT CANDLERS" ve you . . .

GHER ILLUMINATION—50 to 100 foot candles—for faster, er production—greater worker efficiency.
TO 50% LOWER INSTALLATION COSTS—Fixtures contain to 80% of necessary conduit—make defense dollars go further.
STER INSTALLATION—Steps up building schedules—plants into production quicker.
IFORM LIGHT DISTRIBUTION—Production equipment can ined at any time without necessity for changing lighting.
PLIFIED MAINTENANCE—Easy to clean, removable por- in-enamel reflectors—save valuable man-hours for production.
LOWANCE FOR FUTURE LIGHTING NEEDS—Illumina- increases up to 45% practical without new fixtures—lower enance.

• Use IVANHOE "50 & 100 FOOT CANDLERS" today for more production . . . better production . . . lower costs. Get all the advantages of the ORIGINAL continuous fluorescent lighting system, recently acclaimed by lighting experts as *"the new lighting standard for industry."*

Don't gamble time or money. IVANHOE "50 & 100 FOOT CANDLERS" are not alone guaranteed, but *proven* . . . proven by more than two years intensive service in America's armories and arsenals, aviation plants, precision instrument companies, key defense plants of all kinds.

No other fluorescent lighting equipment wears such service stripes.

Whether you are a primary defense plant or doing vital sub-contracting . . . your job is too important to your country, your customers and yourself to deny your organization the benefits of IVANHOE "50 & 100 FOOT CANDLERS." Give your workers *the best possible working light* . . . your production manager *speedier output* . . . your treasurer *lower costs* . . . and yourself the satisfaction that you not only have the ideal lighting system for today, but adequate protection for tomorrow's changed lighting needs. Write for full facts.

For Offices, Drafting Rooms and Similar Installations . . . Use Miller Troffers

MILLER TROFFERS—continuous recessed fluorescent lighting system — are ideal for offices, drafting rooms and even factories with acoustical or other hung ceiling constructions. Proven and guaranteed, they, too, are providing better light and increased worker efficiency for many progressive organizations. More than 25 miles of MILLER TROFFERS are in service today. Ask for Bulletin 2G.

Prompt Deliveries—Superlative Service

We are constantly striving to keep deliveries moving smoothly, fast and ahead of building schedules. And no major installation goes in without a Miller engineer on the scene . . . to live with the job until it is operating with maximum results for you.

THE MILLER COMPANY
MERIDEN, CONN.

Pioneers in Good Lighting Since 1844

• MILLER OFFERS A COMPLETE LINE of incandescent and fluorescent lighting equipment, backed by almost 100 years of commercial and industrial lighting specialization. There is an answer to your problems in this *unbiased* lighting service.

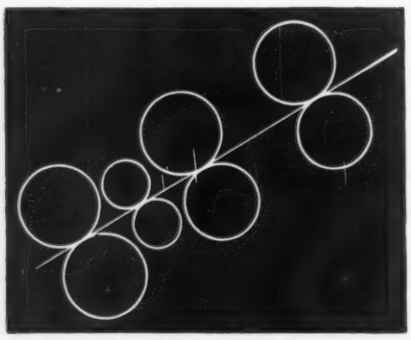
GRANITEVILLE MILL MODERNIZES WITH H & B HIGH-DRAFT ROVING and SPINNING

Many other mills might do worse than to follow the example of the South's oldest mill, the Graniteville Mill at Graniteville, S. C. which has been in continuous and successful operation for almost a century. It has recently completed the modernization of its carding and spinning departments by installing 14 new 112-spindle 10 x 5¼ H & B Four-Roll Slubbers equipped with Scroll Condensers and 60 new H & B Warp Spinning frames (3½" gauge, 2¼" ring) equipped with the H & B Four-Roll Long Draft System. They have also converted 48 old filling frames to Four-Roll Long Draft. Thus roving and spinning combined are reduced from three to two processes.

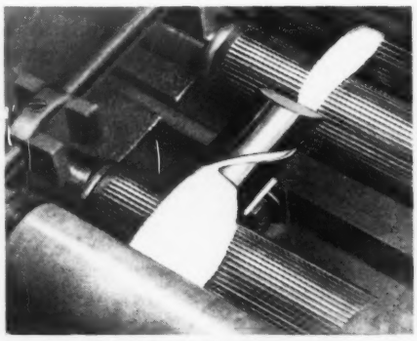
Limited space does not permit a complete list of the reasons why Graniteville and many other mills select H & B High-Draft Roving and Spinning, but one outstanding reason is the SIMPLICITY of both systems combined with a high degree of efficiency. This simplicity assures ease of cleaning, a smaller investment and lower maintenance and upkeep costs.

•

Let us estimate what H & B High-Draft Roving and Spinning will save YOU.



H & B 4-Roll Long Draft Spinning



H & B Scroll Condenser for High-Draft Roving

H & B AMERICAN MACHINE COMPANY

Textile Mill Machinery

PLANT AT PAWTUCKET, R. I.

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not only for textile specialties but also for a complete line of basic chemicals for the processing of all types of fabrics. Our technical Service Representatives, supported by the extensive resources of our modern research laboratories, will be glad to assist you in selecting the most suitable materials for your specific purposes.

AMERICAN CYANAMID
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A Unit of American Cyanamid Company

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District Offices: Wilkinson Boulevard, Charlotte, N. C.; 89 Broad Street, Boston, Mass.; 600 So. Delaware Ave., Cor. South Street, Philadelphia, Pa.; 20 N. Wacker Drive, Chicago, Ill.; Azusa, Cal. Russel & Bayard Sts., Baltimore, Md.; 850 Leader Bldg., Cleveland, Ohio; 931 Fisher Bldg., Detroit, Mich.; Miller Rd., Kalamazoo, Mich.; 900 Shell Bldg., St. Louis, Mo.

*Trade-mark of American Cyanamid & Chemical Corporation applied to wetting agents of its own manufacture.

THERE'S NO PRIORITY on Gray Matter

ALTHOUGH the capacity of H & D's 25 mills and factories is on an "all out" production schedule, the Hinde & Dauch Package Laboratory has a vast supply of "gray matter" available *for your immediate use.* The large backlog of practical experience built up by H & D Package Engineers is mobilized *now* to work out a solution for your packaging problems.

Hundreds of products—from glassware to gas-masks, from foods to fuses—are among the items being delivered under the protection of H & D engineered corrugated boxes. New packages—enabling old customers to place still further emphasis upon economy, enabling new customers to prepare for the future—are being designed daily in the Package Laboratory.

The services of the Package Laboratory are available *now* to any manufacturer. Those using the present, to prepare for the future, will find H & D Package Engineers ready to study both product and potential market—and design a package for a competitive "head-start" when marketing lights again turn green. Those concerned with today's packaging problems will find here, competent recommendations for package simplification.

We welcome the opportunity to design your new packages, to help you with *tomorrow's* marketing problems. Your inquiry will receive immediate attention. You will be under no obligation.

Practical designers versed in all phases of corrugated package engineering comprise the personnel of the H & D Package Laboratory. Their services are available *now* to help you gain a head start on tomorrow's merchandising race.

HINDE & DAUCH *Authority on Packaging*

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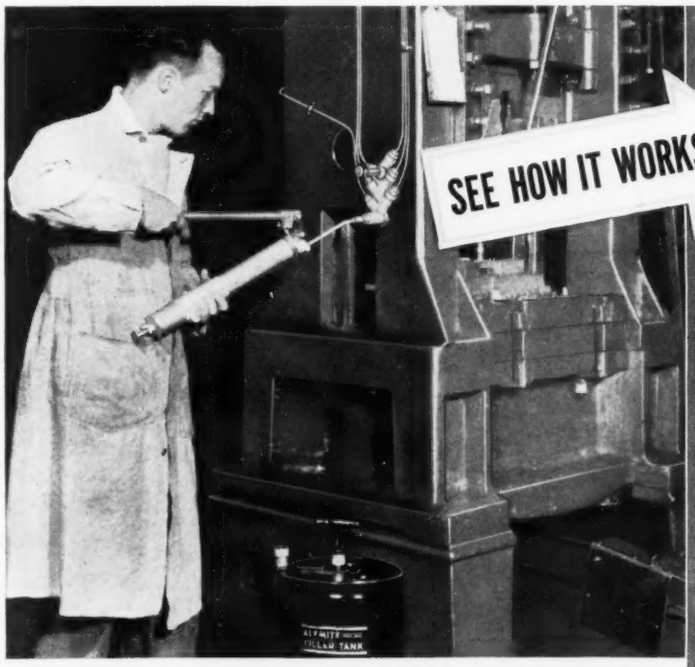
FACTORIES in Baltimore • Boston • Buffalo • Chicago • Cleveland • Detroit Gloucester, N. J. • Hoboken • Kansas City, Kans. • Lenoir, N. C. • Montreal Muncie, Ind. • Richmond, Va. • St. Louis • Sandusky, O. • Toronto

Don't let lubrication Delay Production!

NEW ALEMITE CENTRALIZED LUBRICATING SYSTEM

SERVICES BEARINGS WHILE MACHINES ARE IN OPERATION!

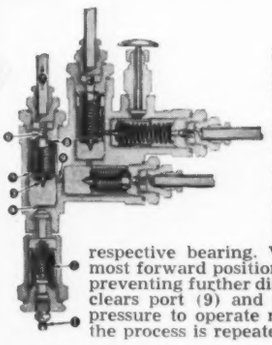


Delivers Pre-determined Quantity of Grease to Each Bearing—Signals When Lubrication is Completed

ALL INDUSTRY is feeling the emergency demand for stepped-up production! Machines and men are being taxed *to the limits of endurance.* Under such conditions it becomes vitally important to make every man-hour, every machine-hour show maximum results in terms of finished products. And positive, dependable lubrication *becomes an absolute "must"!*

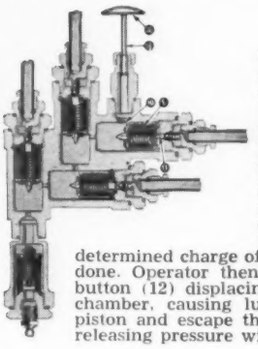
The Alemite Progressive Lubricating System insures dependable, positive pressure lubrication. It speeds lubrication. It promotes safety by bringing remote bearings into easy reach. *It permits lubrication while machinery is in operation,* saving machine-hours and man-hours and increasing output. It may be serviced from one central point by either a power or manually-operated grease gun.

From the standpoint of *saved production time alone,* this system deserves your immediate investigation. Economies resulting from its use soon cover the original cost. The system is inexpensive, easy to install. Write for complete facts!



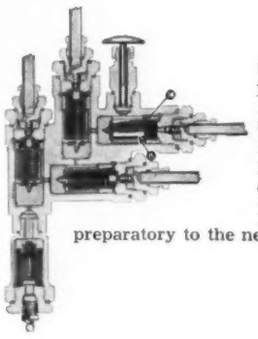
DISCHARGING

Lubricant enters through fitting (1) and is filtered thru strainer (2). Pressure forces valve (3) from seat on intake port (4) moving piston forward (5). Lubricant ahead of piston forces open valve (6) permitting grease to pass into lubricant line (7) and its respective bearing. When piston reaches its most forward position it seats and seals (at 8) preventing further discharge of lubricant. This clears port (9) and permits lubricant under pressure to operate next valve in series, and the process is repeated.



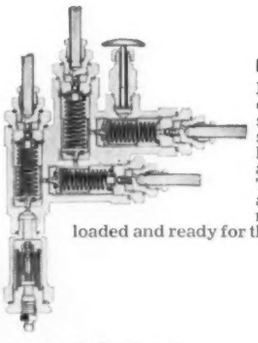
DISCHARGED

The system is shown in its fully discharged position. At this point the last piston (5) clears indicator port (10) allowing lubricant to enter under indicator shaft (11) and moving it to outward position, signalling the operator that all bearings have received their predetermined charge of lubricant and the job is done. Operator then pushes down indicator button (12) displacing lubricant in indicator chamber, causing lubricant to by-pass last piston and escape thru milled slot (13) thus releasing pressure within the system.



RELOADING

Release of pressure within the system permits the springs (14) to return the pistons to their original positions. The lubricant displaced by the return of the piston by-passes thru groove (15) to chamber ahead of the piston, preparatory to the next lubrication.



RELOADED

In this illustration the original position of the system is shown. The self-aligning valves are held in a seated position against the intake ports. The outlet check valves are closed. The system is not under pressure. It is loaded and ready for the next lubrication cycle.

Ask Anyone In Industry!

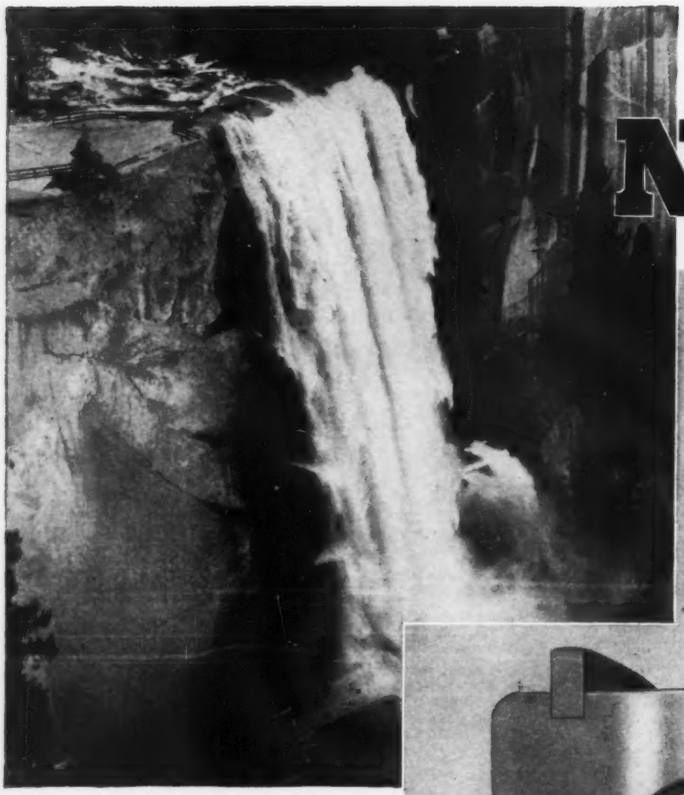
ALEMITE

REG. U. S. PAT. OFF

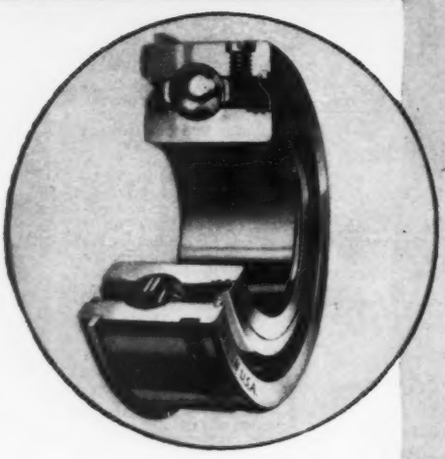
Industrial LUBRICATION

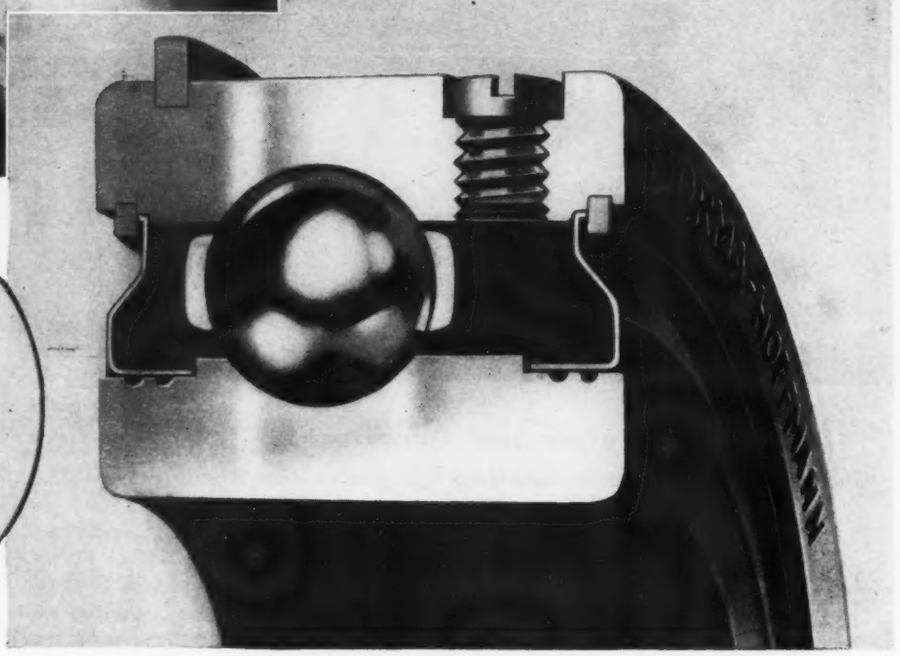
ANOTHER STEWART-WARNER PRODUCT

1888 Diversey Parkway, Chicago, Illinois • Belleville, Ontario



NO *Fear of* GOING DRY!





What water means to the earth, lubricant means to a bearing — life itself. And as the mountain stream provides an abundant and constant flow of water, so the exceedingly large grease capacity of the "CARTRIDGE" BALL BEARING provides constant and abundant lubrication to its raceways and rotating elements.

In the cross-section herewith, note how the DOUBLE-ROW WIDTH GIVES THE "CARTRIDGE" BEARING DOUBLE THE GREASE CAPACITY of the single-row type — guarding against premature dryness. Note also how the in-built metal seals confine the grease WITHIN THE BEARING ITSELF, REGARDLESS OF THE ANGLE OF THE SHAFT.

The "CARTRIDGE" BALL BEARING is equipped with close-fitting, wearless metal shields which, with recessed inner ring construction and two or more grease grooves, form a truly effective labyrinth through which THE GREASE CANNOT PASS AND DIRT CANNOT ENTER.

Adopt the "CARTRIDGE BALL BEARING as your insurance against neglected lubrication, and dirt and grease contamination. It is handled as an integrally sealed unit, needing no supplementary closure parts. It provides easier and quicker assembly and disassembly. It STAYS CLEAN before mounting, during assembly, or when removed, and has convenient regreasing and inspection features.

Write for the Catalog. Let our engineers work with you.

NORMA-HOFFMANN BEARINGS CORP'N., STAMFORD, CONN., U.S.A. • FOUNDED 1911

PRECISION BALL, ROLLER and THRUST BEARINGS

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ELECTROLYTIC HYDROGEN PEROXIDE

● *For highest QUALITY... lowest COSTS... least SECONDS and REJECTS... latest and most practical BLEACHING PROCEDURES in the peroxide bleaching of cotton, wool, silk, rayon and specialties. You are invited to join the select list of firms which are profiting with* **BECCO** *Hydrogen Peroxide and* **BECCO** *Technical Service. Write Becco Sales Corporation, Buffalo, N. Y.; Boston, New York City, Philadelphia, Chicago and Charlotte.*

plus

BECCO TECHNICAL SERVICE

Less Oil—

—when your looms run on SHELL TEXTILIS OIL It's 100% Lubricant

BECAUSE of its tenacious film, superior stability and unusual scouring characteristics, the Shell Textilis Oil used in loom lubrication . . .

1—Reduces oil throw
2—Lubricates effectively with less oil
3—Does not clog oil holes and grooves —even in long, hard use
4—Easily removed from goods by ordinary finishing processes
5—Uses less power—cuts down wear

There are 14 Shell Textilis Oils—each one equally efficient in doing the work for which it was designed. Call in the Shell man now. Give him your toughest lubrication job. Watch him lick it.

SHELL TEXTILIS OILS

CHEMICALS FOR TEXTILES

Four facts and a check list for your notebook!

1. Scattered across America are thirteen Monsanto plants and ninety-nine Monsanto warehouses to fill your needs—as promptly and efficiently as possible in the present emergency!

2. At work in control laboratories in each of those Monsanto plants are scores of highly trained technicians to make certain you get the consistently high quality you expect when you specify Monsanto.

3. In other laboratories devoted to research are many more skilled technicians and scientists searching for new and still better ways to help you spin, weave and process textiles.

4. And attached to Monsanto's Technical Service Department are practical specialists who know both chemicals and textiles. Their job is to bring you the latest products of Monsanto research—and to bring your problems to Monsanto research for cooperative solution.

Those are just four of many excellent reasons Monsanto Chemicals are proving indispensible to the textile industry. For information or technical service, inquire: MONSANTO CHEMICAL COMPANY, Everett, Massachusetts, and St. Louis, Missouri, U. S. A.

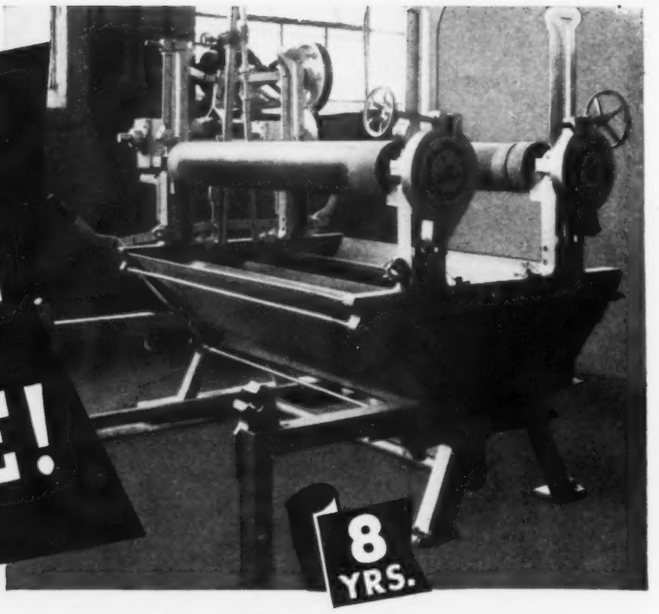
Check your needs

Against this list of uniform, high-quality Monsanto Chemicals for the textile industry

- ☐ ACETIC ACID
- ☐ AQUA AMMONIA
- ☐ ALUMINUM SULFATE
- ☐ AROCLORS (chlorinated diphenyls)
- ☐ CALCIUM SULFATE
- ☐ CAUSTIC SODA
- ☐ CHLORINE
- ☐ DYESTUFF INTERMEDIATES
- ☐ DISODIUM PHOSPHATE
- ☐ GLAUBER'S SALT
- ☐ LACQUERS
- ☐ MERCLOR (bleach)
- ☐ MIXED ACID
- ☐ MONOAMMONIUM PHOSPHATE
- ☐ NITRATE OF IRON
- ☐ OIL OF VITRIOL
- ☐ SANTOMERSE (wetting and surface active agent)
- ☐ SODIUM ACID PYROPHOSPHATE
- ☐ SODIUM BISULFITE
- ☐ SODIUM SULFATE, anhydrous
- ☐ SODIUM SULFITE
- ☐ SOLVENTS
- ☐ SOPET (wool spinning lubricant)
- ☐ SULFURIC ACID
- ☐ TETRAPOTASSIUM PYROPHOSPHATE
- ☐ TETRASODIUM PYROPHOSPHATE
- ☐ TRICALCIUM PHOSPHATE
- ☐ TRISODIUM PHOSPHATE

MONSANTO CHEMICALS
SERVING INDUSTRY . . . WHICH SERVES MANKIND

Get the Extra PROTECTION that comes from EXPERIENCE!



Eight years ago, Holliston Mills, of Kingsport, Tenn., discovered the economies and product improvement which IngAclad makes possible in the textile field.

—whenever and wherever you use STAINLESS-CLAD STEEL

This Pressure Cooker, fabricated of IngAclad by Camden Copper Works, of Camden, N. J., has been in service since 1935.

IngAclad Stainless-Clad Steel has stood the test of 10 years in actual use. Keep this in mind when you specify Stainless-Clad material.

Remember, IngAclad Stainless-Clad Steel gives you two important assurances:

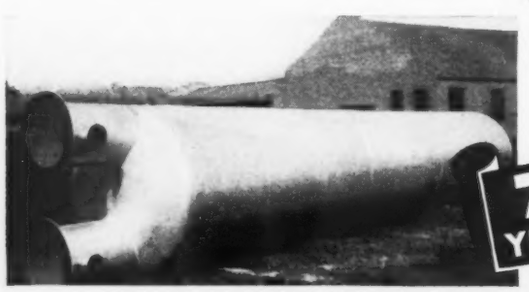
1st. The exclusive Ingersoll Process, which inseparably bonds the two metals, and

2nd. IngAclad is backed by a record of 10 years in continuous satisfactory service.

To get this extra protection that is yours without extra cost, specify IngAclad Stainless-Clad Steel . . . ALWAYS!

INGERSOLL STEEL & DISC DIVISION
BORG-WARNER CORPORATION
310 South Michigan Avenue Chicago, Illinois
Plants: Chicago, Ill.; New Castle, Ind.; Kalamazoo, Mich.

Unretouched photo of machine-cutting. Note the inseparable bond formed between the mild steel and the cladding of stainless steel.

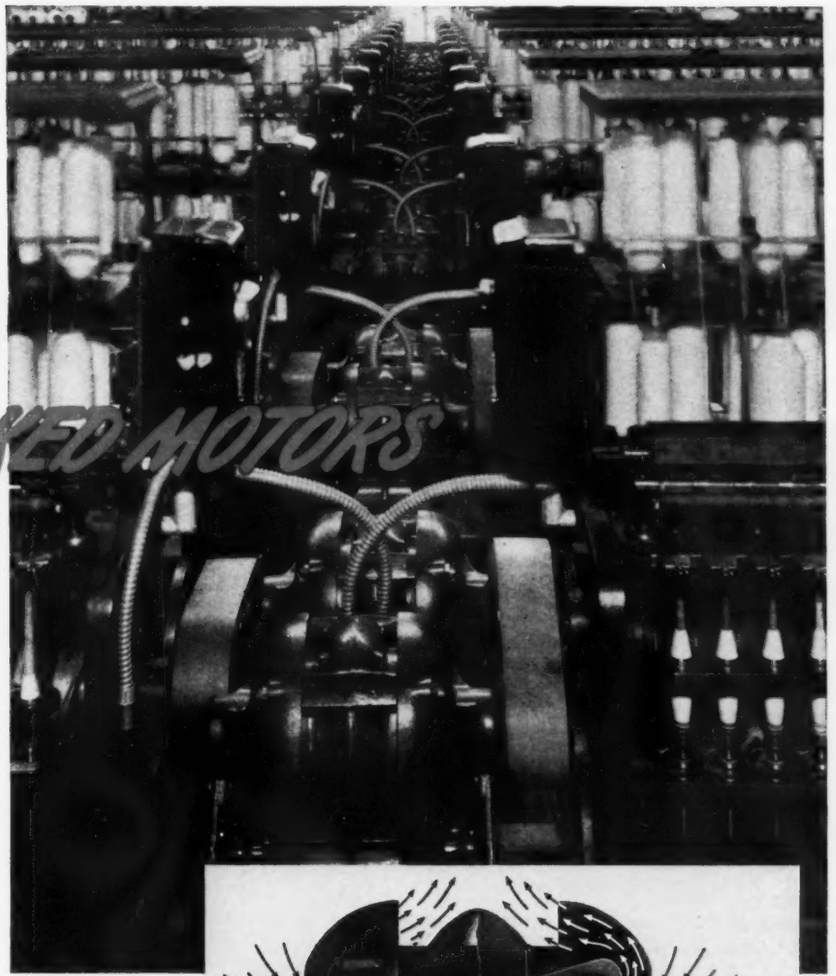


In 1934, this Adsorber was fabricated for the Columbus Coated Fabrics Co., Columbus, Ohio. Four similar installations have since been made.

"A Borg-Warner Product"

INGACLAD
STAINLESS-CLAD STEEL
has a record of
10 YEARS
in continuous service

There'll Be NO LINT-CHOKED MOTORS In This Mill



WESTINGHOUSE LINT-FREE MOTORS CLEAN THEMSELVES

Unobstructed Passages Let Air Circulate

Westinghouse engineers designed the Westinghouse lint-free motor with large generous air passages. The inner surfaces of the end brackets are sanded, filled and finished smooth with a special high-gloss, hard-drying enamel. There are no pockets or corners in the passages where lint can catch. Lint goes in, through and *out*. The windings, too, are finished smooth as glass to prevent the accumulation of lint.

Ball Bearings Are Permanently Sealed

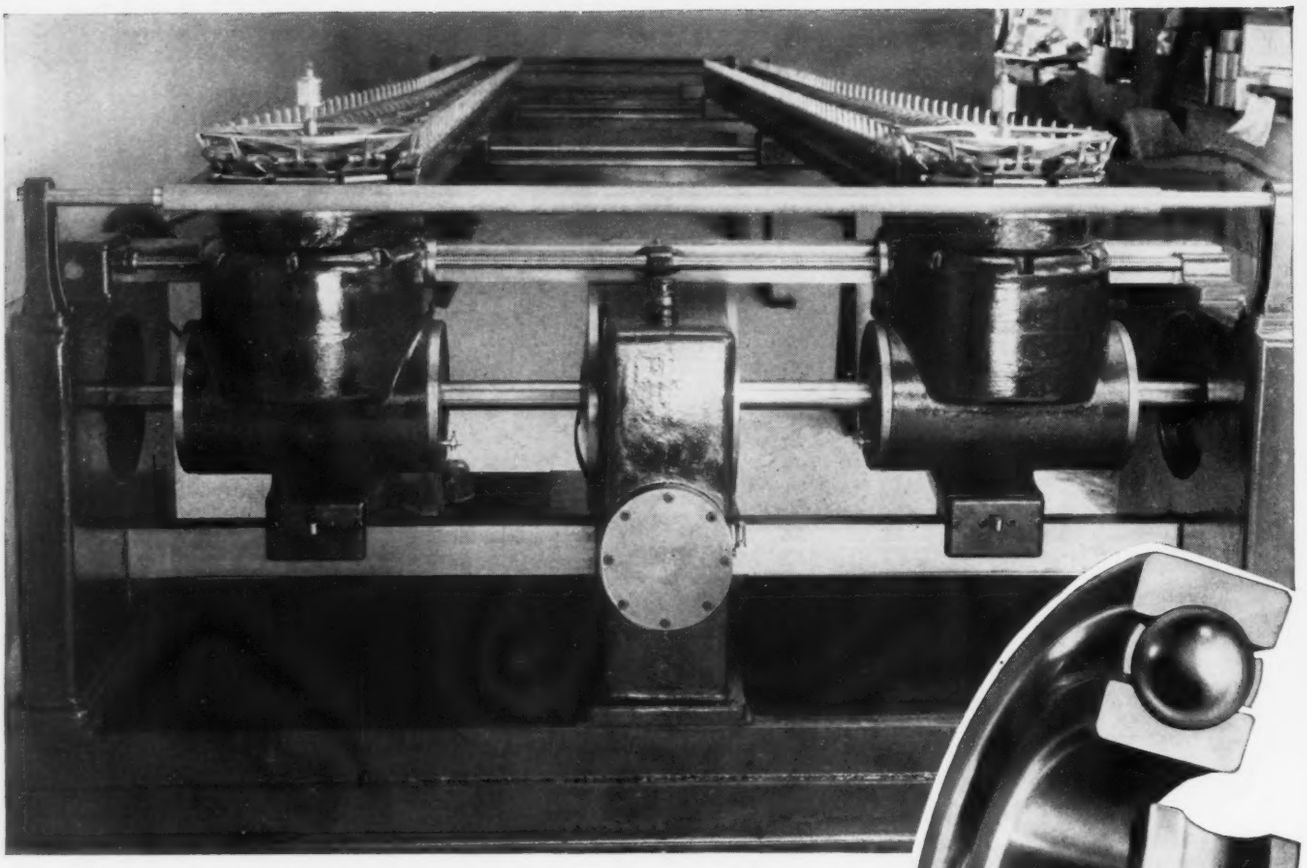
Sealed bearing construction permits the use of a smooth, rounded bearing housing without grease fittings or other projections on which lint might catch. And since no external lubrication is required, over-greasing and the use of dirty or improper lubricant is eliminated. Also, with lubrication maintenance eliminated, there is no chance for drops of grease or oil to collect on the housing and provide spots on which lint can stick.

Leading textile mill operators throughout the country have been quick to recognize the time and cost saving advantages of this special textile motor. If you don't have full details on how you, too, can use it profitably, see your Westinghouse representative soon. J-21114

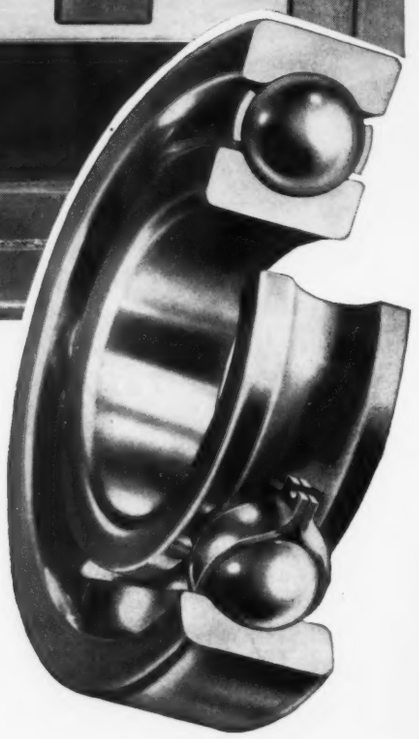
Air circulates freely through the unobstructed air passages of this lint-free motor. Note the sealed ball bearing construction that eliminates lubrication maintenance and permits the use of a small, smooth, round bearing housing.

Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.

Westinghouse Lint-Free Motors



Built by Winsor & Jerauld Mfg. Co., this Tentering Frame is SKF-equipped on vertical drive, horizontal, worm wheel, worm, and vertical idler shafts.



Where performance counts

THE BEARINGS ARE SKF

On the vital moving parts of this Tentering Frame where textile men are apt to worry about bearing performance, Winsor & Jerauld engineers followed the practice of specifying SKF and playing safe. Check up on that point yourself. On this machine you'll find 15 SKF's taking radial and thrust loads year after year with the greatest of ease. You'll find shafts always properly positioned. You'll find bearing trouble a thing of the past. On jobs where Performance is the thing that counts, the bearings are always SKF. 4895

SKF INDUSTRIES, INC., PHILA., PA.

BALL SKF BEARINGS

U. Navy "E" Insignia (twice size)
aw d employees of Textile Machine
W for outstanding production of
N Ordnance materials for defense.

An invitation to the dance . . . Every woman knows that the allure of her stockings is in the quality of the fabric. Every hosiery manufacturer knows that the better the needles, the better the fabric. Keep your knitting machines young and effective with TMW Needles.

TEXTILE MACHINE WORKS • READING, PA.

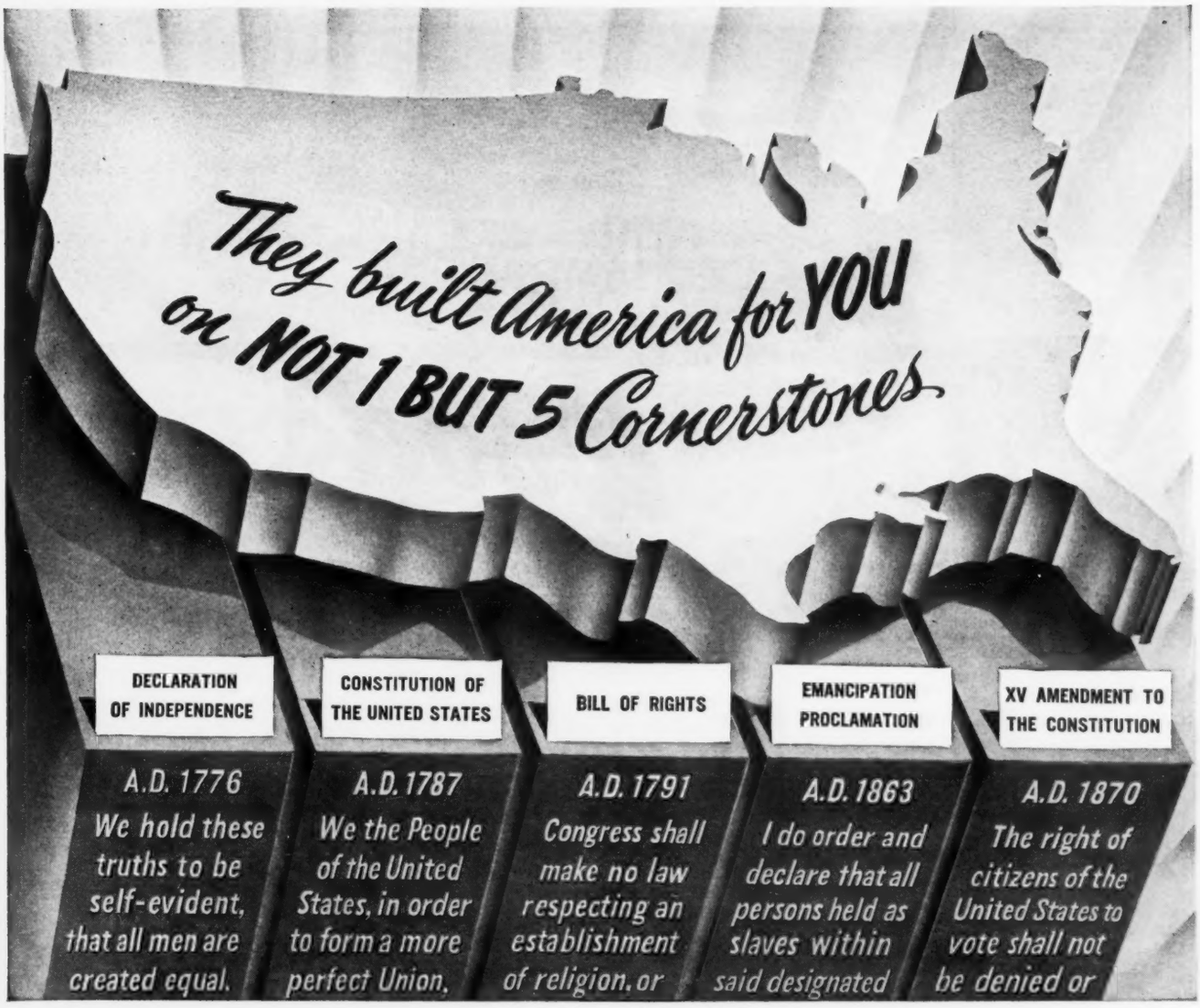
U. S. Navy Ordnance Flag and "E" Pennant awarded Textile Machine Works for outstanding production of Naval Ordnance materials for defense.

"He who procrastinates struggles with ruin"

HESIOD

Regardless of the fibre used, the new READING 30-section 51-Gauge Full-Fashioned Knitting Machine produces 104 per cent more volume and 156 per cent more value than ordinary 20-section 42-gauge machines . . . . *And remember: Money invested in modern machinery serves as insurance for your total investment.*

TEXTILE MACHINE WORKS • READING, PA.


They built America for YOU
on NOT 1 BUT 5 Cornerstones
DECLARATION OF INDEPENDENCE
A.D. 1776
We hold these truths to be self-evident, that all men are created equal.
CONSTITUTION OF THE UNITED STATES
A.D. 1787
We the People of the United States, in order to form a more perfect Union.
BILL OF RIGHTS
A.D. 1791
Congress shall make no law respecting an establishment of religion, or
EMANCIPATION PROCLAMATION
A.D. 1863
I do order and declare that all persons held as slaves within said designated
XV AMENDMENT TO THE CONSTITUTION
A.D. 1870
The right of citizens of the United States to vote shall not be denied or

YOUR U. S. A. HAS ALWAYS DEPENDED ON NOT 1 BUT 5

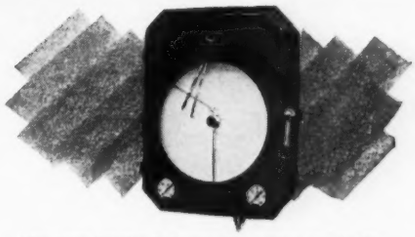
MAKE AMERICA STRONG. That was the job of the men who planned this country. Keep America strong. That's your job. They did a grand job then... you're doing a great job now...

America's worth protecting. It's so *rightly* built. This nation stands solid on five cornerstones of freedom... *not one cornerstone, but five.* We demanded the right to *be* free, and dared to declare our everlasting Independence. We wanted a workable plan to secure the Blessings of Liberty, so we wrote ourselves a Constitution. We wanted to guard and shield these liberties, and added the Bill of Rights. We wanted freedom for *all* Americans, so we issued a Proclamation of Emancipation from slavery. We knew that all free men must have the right to vote, so we guaranteed that right by the Fifteenth Amendment. The U. S. A. you love today depends on not one but five.

In times like today, a company like Taylor is just like the rest of America. It so happens that here at Taylor Instrument Companies we have some special skills, some extra experience, some engineering knowledge, some materials that Uncle Sam thinks pretty useful. He's using them. Naturally, these new activities have changed the normal picture. We have had to postpone, for the time being, some of our ordinary activities. You understand. Everybody's at work defending us all—we're on "the big job" with you.

Taylor Instruments have always been essential to American Industry. Perhaps they are more essential than ever today, because so many of the industries essential to defense are relying on Taylor. Precision processes are speeded up—with Taylor Instruments. Absolute accuracy is safeguarded—by Taylor Instruments. Taylor's "automatic watchfulness" is releasing skilled workers for other work.

How can Taylor be of most use to *you* now? What we know about instruments is yours for the asking—no strings attached. Perhaps we can make suggestions that will increase the efficiency of your whole instrument set-up. We want to give you that service. Call on us plenty, and often. Our job is to help you do *your* job better. Taylor Instrument Companies, Rochester, N. Y. Also Toronto, Canada.



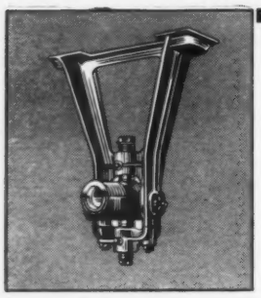
The New Taylor Fulscope Controller protecting America's production with not 1 but 5 forms of control

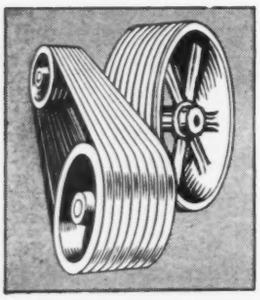
Taylor-MADE MEANS BETTER MADE IN AMERICA BY AMERICANS

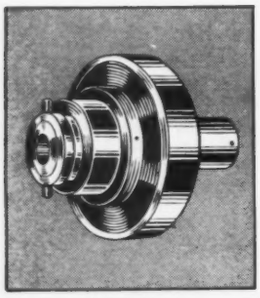
Taylor

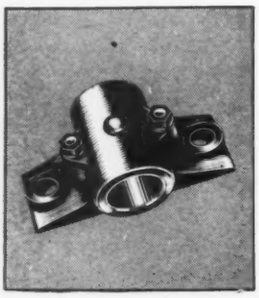
Indicating Recording Controlling

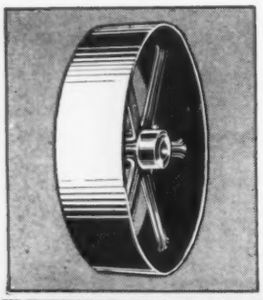
TEMPERATURE, PRESSURE, FLOW *and* LEVEL INSTRUMENTS

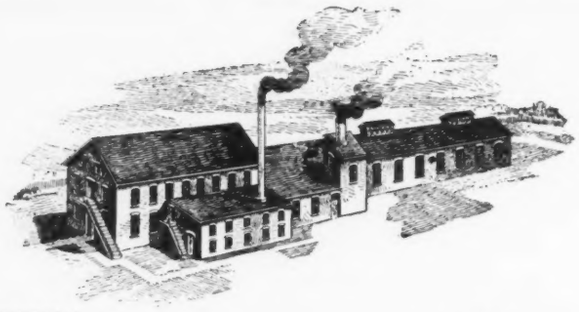












1857
—the first WOOD'S factory

Wood's

LONG LIFE LINE

OF QUALITY POWER TRANSMISSION EQUIPMENT

At no extra cost, Wood's Products give you the benefit of that priceless ingredient . . . *experience.*

84 years of specialization in the design, development and application of quality transmission equipment has created a wealth of knowledge . . . available to you.

And you'll find that Wood's Products — through efficient and economical operation — are saving time and power in all lines of industry. What about your own plant? Investigation pays . . . try it!

EVERYTHING IN TRANSMISSION

BEARINGS • COLLARS • CLUTCHES • COUPLINGS • CONTACTORS • HANGERS
PILLOW BLOCKS • PULLEYS • V-BELT SHEAVES AND COMPLETE V-BELT DRIVES

T. B. Wood's SONS COMPANY
CHAMBERSBURG, PA.

1941—WOOD'S large, well equipped plant

84 YEARS OF UNINTERRUPTED SERVICE

Wood's the LONG LIFE LINE

Why Stainless Steel

is specified for textile equipment

PRACTICAL experience has shown that stainless steel equipment is ideally suited for use in the textile industry. This smooth-surfaced metal practically eliminates defects, such as torn fabrics and "off-shades" from previous dyeings. Lost time for "boiling-out" is eliminated, and it is even possible for the dye bath to remain in contact with the metal overnight without any fear of metal contamination. In addition, stainless steel has high strength and ductility . . . freedom from warpage . . . long service life with minimum maintenance. The illustrations show a few applications which may suggest where you can use this lasting metal to advantage, if you make material for National Defense.

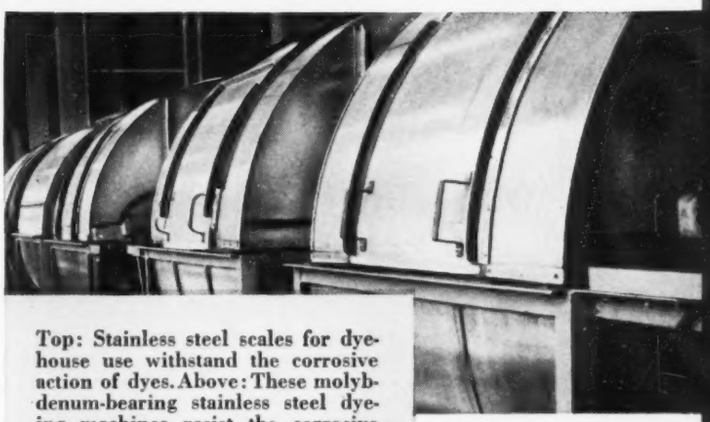
Although we do not make steel of any kind, we have for over 35 years produced "Electromet" ferro-alloys used in making steel. With the knowledge accumulated from this experience, we are in a position to give you impartial assistance in the selection of a stainless steel for your particular problem.

ELECTRO METALLURGICAL COMPANY

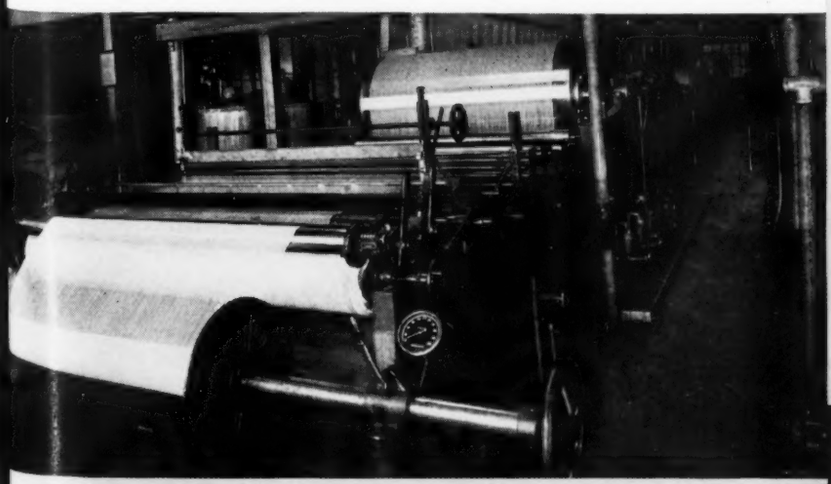
Unit of Union Carbide and Carbon Corporation

30 East 42nd Street UCC New York, N. Y.

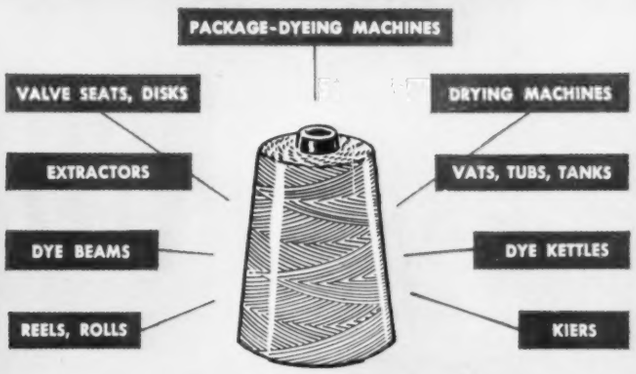
In Canada: Electro Metallurgical Company of Canada, Limited, Welland, Ontario



Top: Stainless steel scales for dye-house use withstand the corrosive action of dyes. Above: These molybdenum-bearing stainless steel dyeing machines resist the corrosive action of acids. Below: Colors can be changed rapidly in this dyeing machine because stainless steel is easily cleaned.



The stainless steel size box and rolls on this rayon slasher are immune to rusting and reduce maintenance costs.



Some Textile Uses of Stainless Steel

Electromet
Trade-Mark
Ferro-Alloys & Metals

RUB APRONS
for Woolen-Type Cards

Can you in these busy times make use of an increase in card condenser production of 25% or over and an increase in jack-spool capacity of from 40 to 50% by weight? If so, adopt the latest scientific improvement in woolen carding — Bull Dog synthetic rub aprons.

These aprons have proved themselves in actual production in numerous mills, and these mills have been consistently reordering. Their managements are unanimous in their conviction that Boston Woven Hose & Rubber Co. has made an outstanding contribution to the efficiency of card condensing.

•

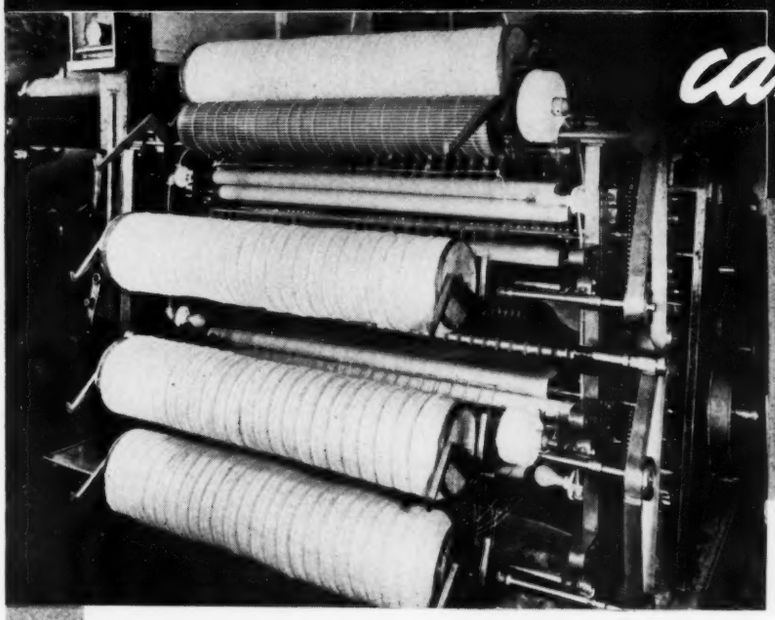
The largest plant in the world devoted exclusively to the manufacture of Mechanical Rubber Goods.

BOSTON WOVEN HOSE AND RUBBER COMPANY

BWH

WORKS: CAMBRIDGE, MASS.

What BULL DOG RUB APRONS can do for you



Bull Dog Rub Apron operating in a well-known woolen mill which, after giving them a thorough try-out, has already reordered five times.

The following claims are based on actual production records of numerous mills that have equipped various types of condensers with our aprons:

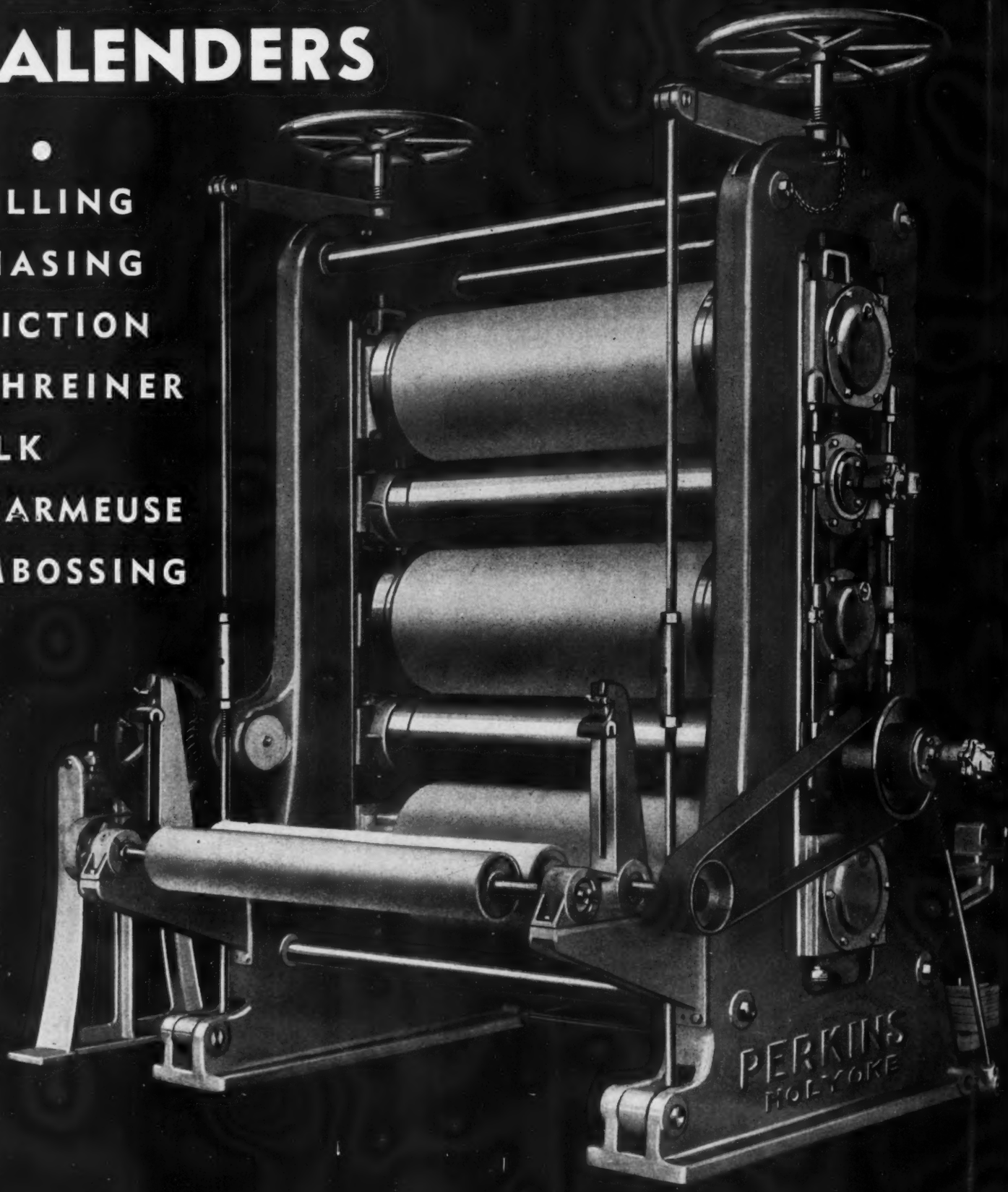
1. Increase card condenser production up to 25% or more.
2. Increase jack-spool capacity 40 to 50% by weight, thus reducing handling charges and making longer runs on spinning equipment.
3. Produce a firmer and denser roving that runs better on spinning equipment.
4. Reduce end breakage.
5. Stay clean longer — will not pick up stain as readily — easy to clean.
6. Resist oil.
7. Resist surface glazing and hardening (oxidation).
8. Retain high surface coefficient of friction without surface treatment.
9. Thoroughly proved in actual production service.
10. Patented reinforced construction.
11. Buttons securely anchored.
12. Reduce card and condenser maintenance costs.

Conclusion: This is the rub apron of the present and future. We urge you to investigate.

POSTAL ADDRESS: P. O. BOX 1071, BOSTON, MASS.

PERKINS CALENDERS

- ROLLING
- CHASING
- FRICTION
- SCHREINER
- SILK
- CHARMEUSE
- EMBOSSING



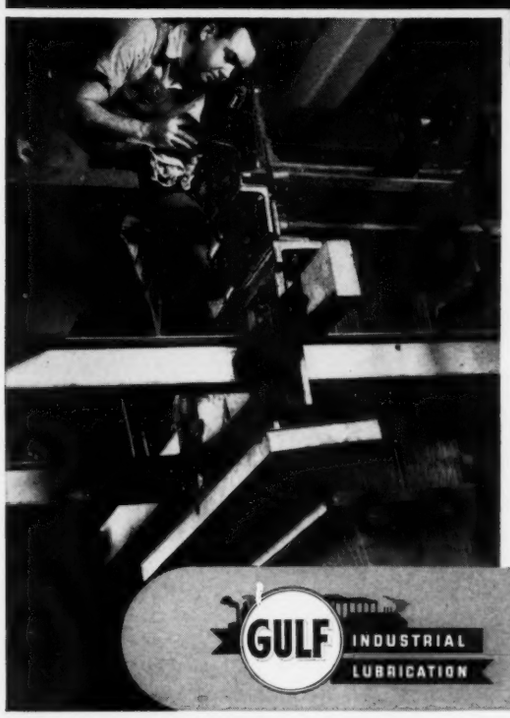
B. F. PERKINS & SON, Inc.

HOLYOKE • MASS.

"With GULF QUALITY LUBRICANTS we get a 'production bonus' from our Jacquard looms"

. . . says Superintendent of Weaving

(Above left) Actual photograph of Gulf engineer consulting with Superintendent of weaving on Jacquard loom lubrication. *(Below left)* "Fixer" lubricates the Jacquard head.



GULF INDUSTRIAL LUBRICATION

"We get important savings in maintenance, too, from proper lubrication"

"GULF quality lubricants are doing a real job for us," says this superintendent of weaving. "Month after month our cost and production records tell a story of the benefits of good loom lubrication—improved quantity and quality of production, increased efficiency, and lower maintenance expense."

Perhaps considerable improvement is possible in the performance of equipment in *your* mill. Investigate — call in a Gulf engineer and ask him to recommend the right lubricant and its proper application for each moving part. You can rely upon his recommendations — they are based on broad experience with equipment similar to yours.

Good lubrication—always a necessity for the satisfactory operation of mechanical equipment—today is a vital requirement for the attainment of maximum production. Gulf quality lubricants are quickly available to you through more than 1200 warehouses located in 30 states from Maine to New Mexico. Write or 'phone your nearest Gulf office today.

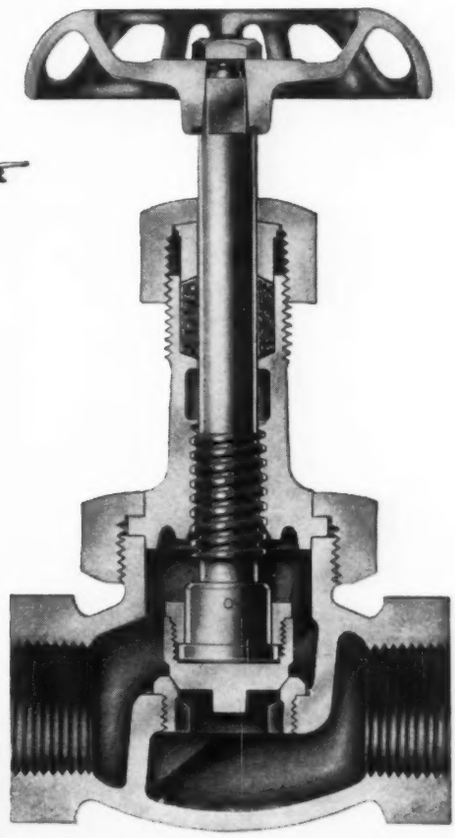
GULF OIL CORPORATION • GULF REFINING COMPANY • GULF BUILDING, PITTSBURGH, PENNSYLVANIA

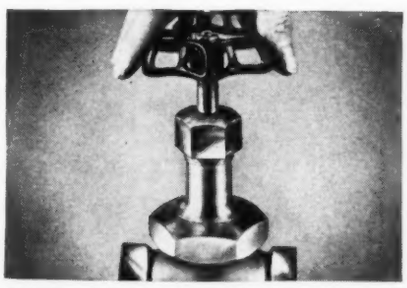
This Garment Made Of
Durene
(2 Ply Mercerized Combed Cotton)
Absorbs and evaporates perspiration twice as fast as garments made of ordinary cotton yarn*... EXTRA comfort, health protection and cleanli...
*Tests by U.S.
STANDARD Durene . . .
for MARCHING MEN
The uniform quality of all Standard Durene Yarns contributes to wear and comfort in knitted shirts and shorts, hose and other knitted garments.
This uniformity is a production asset when knitters must deliver top output without interruption. It follows naturally from the rigid controls of all processes in the making of Standard Yarns—controls which begin with the selection of cotton and carry through preparation, spinning, mercerizing and packaging.
Maintained quality is a tradition which goes back to the Company's beginnings in 1877.
STANDARD-COOSA-THATCHER CO.
CHATTANOOGA, TENNESSEE • Sales Office: 804-6 Lafayette Building, Philadelphia, Pa.
New York, N. Y. 185 Madison Ave.
Chicago, Ill. 940 Merchandise Mart
Greensboro, N. C. Guilford Building
Reading, Pa. Reading 6282
SPINNERS MERCERIZERS S-C-T DYERS BLEACHERS
STANDARD DURENE • SELO • PREEMO • COMBED SAKS • THREADS • COMBED PEELERS

Yes..there is a difference

in regrinding valves!

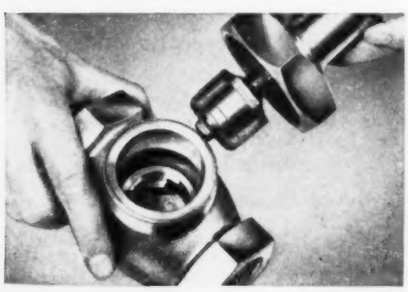
Check over the extra convenience and service features you get in this Bevel Seat type Regrind-Renew Valve— JENKINS FIG. 970



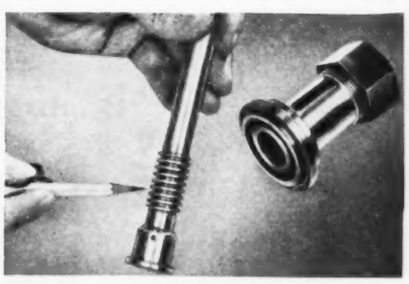


1 Start with the perfect grip, non-heat handwheel. The ingenious deep scallop design affords a firm grip even for greasy hands. Trimming of this valve is interchangeable in globe or angle bodies, screwed or flanged.

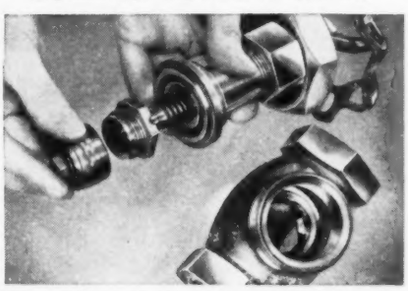
2 Notice how easily the valve can be repacked. Loosen the hexagonal packing nut, slide the packing gland up and new high pressure asbestos packing can be readily inserted.



3 Bonnet and trimming are removed simply by loosening the husky union bonnet ring. Spindle has a hole drilled for pin insertion to simplify regrinding operation, with the spindle serving as a regrinding tool.



4 Look at those perfectly machined spindle threads that afford full engagement with the bonnet. Also the beveled shoulder that seats firmly in champered surface of the bonnet to permit repacking under full pressure.



5 See how easily the nickel alloy disc can be renewed. It screws over the disc lock nut and is held securely by a lock-washer with bent-over flanges. Beveled seating surfaces of the disc and renewable nickel alloy seat ring remain constant no matter how often they are reground.

Here is a valve that welcomes your most critical examination. In these illustrations we practically turn it inside out to show you how it is especially suitable for severe services where tightness is essential and operation is frequent.

Study the section view for example. Notice the extra heavy spindle with perfectly machined threads of correct pitch and lead to insure tight closure with least closing effort. The bevel face of the seat ring parallels and equals that of the disc. There is no overhang; disc will not have shoulders or grooves cut in it when regrinding. Also, the disc is self-adjusted to the seat by the crowned spindle end.

From wheel nut to Jenkins specially wear-resistant nickel alloy seat, you will find perfection of design and workmanship in every detail of Fig. 970. It is available in a wide range of sizes; globe or angle, screwed or flanged—for steam services up to 300 lb.; 600 lb. non-shock cold oil, water, gas.

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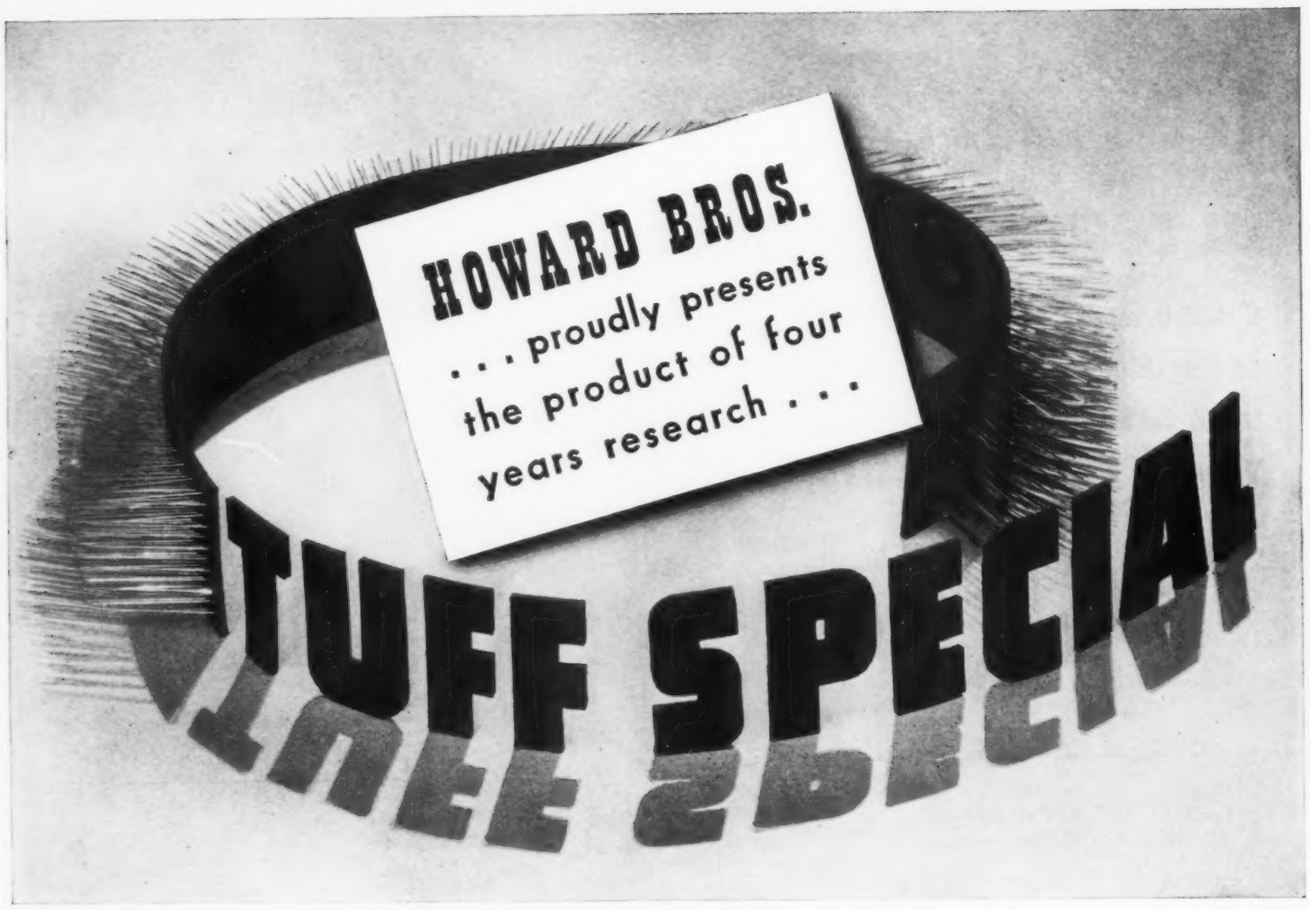

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THEY GREW UP TOGETHER.....

But one's a "black sheep"!

The other was bleached by the ACTIVATED TEXTONE—Hypochlorite Process and retained its strength!

● This is an unretouched photograph of two swatches of white cotton fabric after silver nitrate test for oxycellulose (the presence of which indicates degrading and weakening of fibres, causes yellowing on storage and results in uneven dyeing). Since oxycellulose precipitates silver, the darker swatch — bleached with ordinary hypochlorite—shows presence of a high degree of oxycellulose. The lighter swatch—bleached with hypochlorite *plus* Textone—developed *little* color. No oxycellulose indicated.

These two swatches are from the same piece of cloth and had received identical treatment, including the same kier boil, prior to bleaching. Therefore, the difference in oxycellulose is entirely due to the difference in the bleaching operation.

When Textone, a Mathieson developed sodium chlorite product, is added to regular hypochlorite bleach it is possible to bleach to highest and more permanent whites with maximum strength retention. And when properly handled this entirely new bleaching process *will not form* oxycellulose. An Activated Textone-hypochlorite bleach has enough oxidizing power to destroy all color in cotton fabrics—but *does not attack the fibre itself.* This eliminates the need for accurately controlling concentration, temperature or time of bleach. Textone ($NaClO_2$) controls and reinforces your regular hypochlorite —its use involves little change in bleach routine or equipment. And its bleaching power is equal to that of chemic of nearly *twice* the available chlorine.

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GREENVILLE

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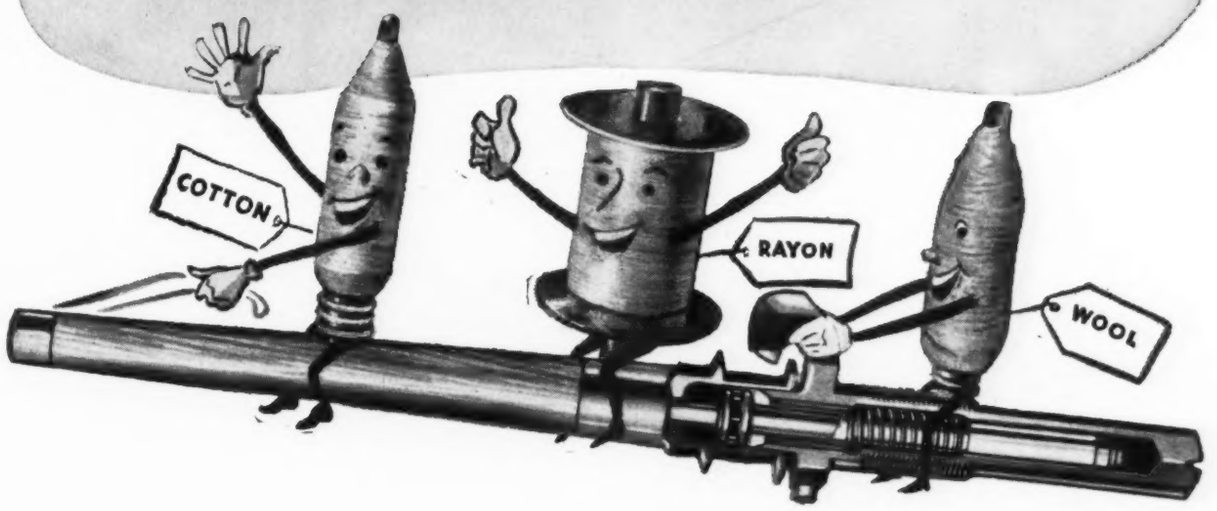
IN THE NEXT

NEW RESEARCH PLANS and programs are in the making, and several feature articles in the December issue of TEXTILE WORLD will be devoted to what is under consideration as well as what has already been accomplished. The annual meeting of the United States Institute for Textile Research, the first under its newly appointed officers and with its new relation to the Textile Foundation, reported in that issue, provides a focus for this material on research. There is unusual timeliness in these developments as aids during the arduous wartime period and in the post-war readjustment.

Stepping up mill efficiency is of No. 1 importance today. Especially useful, therefore, is an article describing how repair cost, machine efficiency and control of defective goods were dovetailed in a comprehensive plan used by the weave room of a large mill.

The Army QM has cooperated in the preparation of a short series of technical articles on causes for rejection of textiles, the first of which will appear in December. Also scheduled for that issue are articles on causes of filling bands in rayon fabrics, economy in production and use of heat, and other current mill problems. You will also be brought up to date on Washington developments.

"WE'RE GETTING A SMOOTHER RIDE"



WHETHER you run cotton, wool, or rayon, you will spin smoother, higher-quality yarns, and use less power over the years, when you use *Texaco Spindura Oils* for spinning and twisting.

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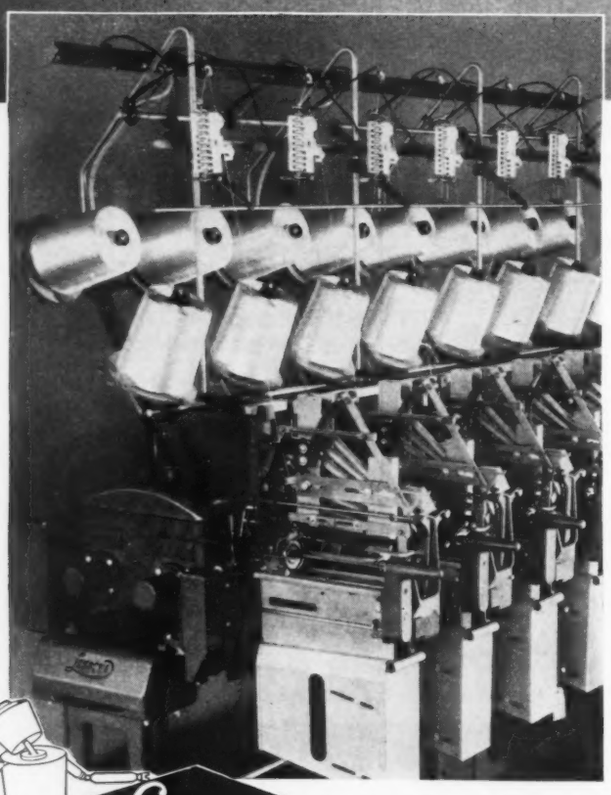
UNIFORM BOBBINS FOR HIGH-QUALITY RAYON FABRICS



The bobbins in the illustration were produced on the Universal Automatic at a high spindle speed. Yet the original quality of the yarn has been preserved, insuring uniformly high-quality fabrics.

A few of the features of the machine which protect the original quality of the yarn are:

A. No strain when starting. When the spindle starts after bobbin transfer, the tensions are held open automatically for an instant, and there is no sudden strain on the yarn.

B. Gentle doffing. Completed bobbins are carefully passed by a tilting shelf into a container directly under the spindle. They are positioned in the box so that there is no contact between the yarn and the metal rings on other bobbins.

C. Clean hands. The work can be divided so that one operator with clean, smooth hands does all the handling of the yarn, such as creeling; while the other operator handles empty bobbins.

Note rugged construction of Universal Automatic High-Speed Bobbin Winder.

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TEXTILE WORLD

DOUGLAS G. WOOLF, Editor

Where Do We Go From Here?

THE ABOVE is not a new heading for an editorial on this page. But every once in a while we have to take stock.

Looking ahead, there are these probabilities:

1. We are headed toward the most gosh-awful period any of us has yet faced.

2. The increasing demands on money, man-power, and materials, for defense purposes, will threaten contraction of the consumer-goods industries such as has never been known before.

3. The tax-burden will be increased beyond any present conception.

So, where do we go from here?

First, we have to start.

And we should start with the conviction that there will always be a textile industry.

With that as a basis, we have to make up our minds that we shall shape the future of the textile industry to return over a sustained period of time a reasonable profit to the capital engaged, and to the labor employed.

That's a good trick, if we can do it.

And we have to do it.

SO WHAT? The first and most important thing to realize is that this is today's job, and not something to come up for attention a few years from now. The best time to tackle the problem of a future crisis is while the going is still good. And yet that's just the opposite of the general attitude in the industry today. The latter attitude was best, even though unconsciously, expressed by a representative of one of the greatest textile mills in the following reply to a request that he become a member of a certain technical organization: "We recognize fully the value of the work of ———————— and constantly make use of it. However, at present we are so busy that I do not think it would be to our advantage to take out a membership."

(No comment needed.)

Having established the right timing, which is NOW, the next thing is to isolate the major lines of action which promise hope of cushioning a company against shortages, sales resistance, and potential shut-downs. At the top of the list, under present conditions, should be put: (1) New product development; (2) merchandising aggressiveness; (3) production research.

And yet if you could get a cross-section of the industry, you would find that these three activities are on the spot right now. "Why plan new products when we can't begin to supply the demand for our existing ones?" "Why advertise when we have nothing to sell?" "Why worry about reduction of production costs when there is such a good manufacturing margin?" That is today's attitude.

But tomorrow is on its way. And tomorrow will need new products to sell in place of those which can't be made any more. It will demand a promotional program all tooled up to meet the new and more bitter competition, rather than a program which has become rusty through disuse. Tomorrow will necessitate a degree of production efficiency and economy never known before, if there is to be a penny or two left out of each dollar, after taxes.

SURE, YOU COULD GET BY for a little while yet, without bothering about these things. Sure, you're so busy at present that you haven't got time to think about anything else.

But those firms which find time to think about tomorrow today, and to do something about it today, will be the ones that get the business and the profit tomorrow.

All the above will be true, no matter how long the present boom lasts. In fact, the longer it lasts, the more severe will be the eventual adjustment. Just another case of: the higher you go, the harder you fall. And the probability is that the boom will be over, this time, long before the war is.

There are too many things today that the average textile manufacturer can do nothing about. He can't stop the defense program even if he wanted to—and 90-odd percent of the industry wouldn't stop it if they could. He can't dodge the ever-increasing tax-bill, unless he wants to go to Atlanta. He can't prevent the scarcity of critical materials from encroaching upon his business, and his production schedules.

The obvious alternative is to tackle those problems which will yield to good management.

There are many textile companies still in successful existence today, which survived the short lush aftermath of the last war and the long dismal depression which succeeded. There are just the memories of many more companies which failed to survive. The former did something about it; the latter didn't.

Now, today, is the time for every company to decide whether it wants to be a survivor or a memory. And to do something about it.

THE EDITOR SAYS

Speak Up, American Labor!

ROOSEVELT AGAINST LEWIS! A series of "pretty please" letters from the President of the United States to just one of the 130,000,000 citizens of this democracy. A series of "so what?" letters in return from that one citizen. Roosevelt *asks* Lewis. Lewis *tells* Roosevelt.

That is the sorriest phase of this country's so-called all-out program to beat Hitler.

It is a sorry spectacle to those leaders of the opposition party, like Wendell Willkie, who have supported the Administration's foreign policy. It is a sad fact to millions of ordinary men, like this writer, who want unity first and foremost, in this nation's fight for freedom.

It would still be better if all of us could pull our punches and rally around our leader. It would be a happier circumstance if we could forget that the Administration is merely reaping the seeds of its own sowing in the labor field. Most of us would be willing to forget—and to say: "That was that; this is another day."

But it is not another day. The hard cold fact remains that the President of the United States is still scared of one group: organized labor. He and his bureaucrats can crack down with great glee upon industrialists, businessmen, big and small. But they can't crack down upon the greatest obstacle in the way of all-out defense.

Irrespective of the nature of the settlement of the coal-strike issue, the broader issue has not been met conclusively: the ever potential threat of Lewis to the defense program.

Thus, even a belated attempt to correct the evil threatens to be abortive.

BECAUSE WHY? Because for nearly nine years, the Government has fostered a class warfare: a fight between capital and labor. Through its National Labor Relations Board, with its two Smiths, the Administration has encouraged a Gestapo which reached out into every industrial center and created fear and hatred and falsehood in the community. Through the appointment of Hillman as Labor Lord in the defense program, it has led up to the Currier case, and to the cringing policy which that and similar cases have entailed. Through its subservience to John L. Lewis, the Administration has created a Frankenstein which now threatens to destroy, not only the Administration, but the freedom of America. Through the continuance of an inept social worker as Secretary of Labor, Madame Perkins, the Government has yielded its opportunity to solve the national labor problem, by an impartial arbiter.

If this were just a private squabble between two labor factions, it would not be important. But it is: (1) sabotage against the defense program; (2) complete negation of national unity; and (3) betrayal of labor itself.

LABOR is not a faction. It is a composite of men and women who work in the plants of the readers of this publication, and in the plants and mines and stores and service institutions of all business and all industry. Those men and women—or at least 90-odd % of them—are loyal Americans, anxious to support this nation's all-out effort to be free, desiring only a chance to work as free people for the preservation of their families.

But, through the machinations of John L. Lewis, a Fuehrer whose bitterness results from the fact that he suddenly found himself an unimportant man; through the capitulation of Hillman, an able man but one who decided it was safer to yield than to fight; and through the incompetence of Madame Perkins, the ordinary men and women of labor find themselves on a spot. They are placed, through no act of their own, in the position of defeatists—pawns in a game which Lewis and Hillman are playing, and which Perkins permits by stupid connivance.

TO THESE BETRAYERS of the mass of American workers, this warning should be addressed: No one group in this country has as much to lose by a Hitler victory as has the labor-union movement. There are still some Jews left in Germany, but there are no labor unions still remaining. All the gains made by American labor in the last 50 years will be lost over-night if Hitler wins the war.

Now is the time, not only for the President to tell Lewis where he gets off, but for American labor—Tom, Dick and Harry—to show their so-called leaders that they, the workers, *are* the labor party.

Otherwise, America will follow France into extinction.

50 for 1

FIFTY MEN—just any fifty men—stand up against a wall and are shot—dead.

Just fifty men. A mere handful. Only fifty, as against millions who are dying on the Eastern Front.

But, at the other end of the scale, these are fifty men against one: fifty unknown Frenchmen against one known German officer, who also had been shot—dead.

Another fifty Frenchmen—and still another fifty—were marked for the wall, but their liquidation was delayed temporarily. For this delay, Petain, Chief of State, expresses the conviction that all Frenchmen will be "grateful" for the consideration of the Nazis.

Into such a state has France fallen. Not only France, but all the other occupied countries of Europe.

Men, women and children starve. Food, so needed by the inhabitants, travels away in car-loads to feed the Nazi hordes. The Chief of State is "grateful" for Nazi consideration.

This is the world today. This is France, and Norway, and Holland, and Belgium, and Denmark, and Czecho-Slovakia, and all the other occupied nations which once were free.

How about us? We are still free. We still can eat and drink and be merry. We still can tell our Government what we think of it—and we do, except on tax days.

But how soon will we realize we have to work for freedom?

W. R. C. Smith

IN THE PASSING of W. R. C. Smith, both the business press and the textile industry share a loss. The South, as a section, also loses one of its outstanding exponents.

Mr. Smith was an alumnus of our company. We in McGraw-Hill, and on TEXTILE WORLD, feel deeply the loss of a vigorous spirit, fighting for a common cause.

We're Now in a Last-Ditch War

When are we going to get around to starting to get ready to win it?

By DOUGLAS G. WOOLF

WE WROTE A PIECE in these columns a few months ago to the effect that we were practically in a shooting war. We got a lot of bouquets, and one or two bricks—in the ratio of about 10 bouquets to 1 brick. That percentage probably expresses about what the country feels today.

But, unfortunately, most of the country doesn't know what a shooting war means to it—and will mean to it in the future. It is still engaged in the pleasant business of making money out of war. That applies to both businessmen and wage-earners.

This is still a remote war to too many of our citizens, despite the fact that our ships are being attacked, that Hitler now has most of Europe in his grasp, and that the fate of the world, *our* world, will probably be decided in the next year.

Possibly it might help to bring home the facts of life if Americans knew not only that we are in a shooting-war but in a last-ditch war.

Here is the fact, like it or not: This country now represents the only possible off-set to Hitler's industrial predominance. And remember this is a war between industries, even more than between armies—and Hitler now has the industrial machines of countries totaling more than 300,000,000 people. *This is quite literally the last chance to beat Hitler.*

Always before there has been some other country which could be relied upon to do that job. When Poland was attacked, and the Allies went to war, there was the Maginot Line. As other small nations fell, there was still that Line.

Great Britain regarded the Maginot Line as we now regard the Atlantic Ocean. But the Maginot Line collapsed. Then came those black days in June 1940. For months thereafter, many thought that Britain would fall too. Britain stood, despite the unbelievable punishment which her men, women, and children took. And then came Russia. Once more there was another country which might stop Hitler. Russia did stop Hitler, for months and still is giving him plenty of trouble.

But just suppose both Great Britain and Russia are beaten. Then comes the last ditch.

Here is the unpleasant fact which we must face: To date, we have always had someone's skirts to hide behind. For two years, we have been lulled by a false sense of security. Lulled, not to sleep, but to a war boom. We have imagined that we could appropriate billions of dollars, which we haven't got incidentally, and get some one else to win the war, while we in the meantime solve depression, unemployment, and other domestic problems in the process. Sort of screwy, isn't it?

BUT SUPPOSE we have to fight the war ourselves, and alone. What should we do about it—NOW? Here's the answer:

1. We must recognize the urgency of the situation. 2. We must build up internal solidarity. 3. We must utilize, to the fullest extent, all available resources.

We are doing none of these three things. We still regard the Atlantic Ocean as England regarded the Maginot Line. We are still split by dissension. We are still doing a part-time defense job.

Let's take No. 1. It is becoming more and more evident that this country will never recognize the urgency of the situation until it actually goes to war. A declaration of war would produce an entirely different psychology here. In addition, it would have a profound effect inside Germany; would come with terrific force to the people of the occupied countries; and would fortify the British in their resistance. Those are four good reasons why if, as most of us believe, war is inevitable eventually, we should get there first for once instead of letting Germany have the initiative still another time.

On No. 2. Impartial observers have come to agreement on this point: The split in organized labor is probably the most serious single brake on defense production that we have. Its effect is evident on every side, every day. Unless the CIO and the AF of L get together, we shall never have a smoothly operating defense machine. The Currier case itself is ample evidence to that end.

On No. 3. How can we utilize all available resources when strikes in defense industries are constantly tying up the delivery line? There has been a lot of conversation on this point but no action. In the fix we are in at present, there is one answer: an absolute prohibition of defense strikes. The sooner the country gets around to this point of view, the better.

Another way in which we could start to utilize all available resources is to put the 40-hour week into cold storage for the duration. If possible we should work up to an average of 60 hours. We no longer are engaged in a social crusade; we are engaged in a fight for our very existence.

Don't misunderstand us however. We do not think that labor is the only group which has a contribution to make to this program. Industrialists who by hoarding, or by selfish price, production or labor policies, hold out on the defense program, are guilty of traitorous activities.

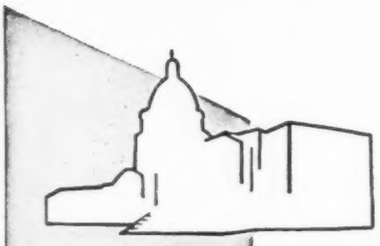
Similarly, Government, both in the abstract and in the individual, has much more of a contribution to make than it has made to date. First of all, it has to give up some of its precious pet plans involving heavy expenditures for non-defense purposes, and concentrate on the job of winning the war. Next, it must forget its socializing instincts for the duration. Third, each individual in the Government must get over the feeling of arrogance which comes usually to every green cop when he first puts on a uniform, and must remember that he is working for the people, and not vice versa.

SOONER OR LATER Hitler is going to be beaten. But every month of delay means untold additional anguish to the world. It is not merely a question of counting on eventual victory for the democracies; it is a question of how promptly that can be brought about. To date our main contribution to that end has been an appropriation of vast billions of dollars, of which only a small percent has been transformed into material which has found its way to the anti-Hitler front.

To repeat, we are now in a last-ditch war. When are we going to start getting ready to win it?

Defense Plans May Be Upped 50%

More supplies, bigger army if needed to beat Hitler; negotiated contracts



McGRAW-HILL WASHINGTON BUREAU

PAUL WOOTON, Chief Correspondent
Blaine Stubblefield
Irvin D. Foos Carter Field
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By BLAINE STUBBLEFIELD

WHATEVER IT TAKES to beat Hitler quick is the program in Washington now. Donald Nelson, SPAB chief and industrial head man of the American war effort, wants to "shoot the works"—double production and get the war over, rather than endure priorities for years. Defense officials say privately they would like to increase the schedule 50%.

OPM's drastic order curtailing uses of copper, its crackdown on a misuser of aluminum, reduction of auto output to half, stoppage of non-defense construction—all these are harbingers of things to come.

Everybody knows now that the production throttle is going to be pulled wide open. But the question of manpower is still unanswered. You read and hear all manner of argument, pro and con, on whether the Nazis can be beaten without American men abroad. Nobody knows, yet.

But the Quartermaster General has instructions to go ahead with supplies, including clothing and equippage for a big Army. You hear all sorts of figures: three million men, five million, eight million. You can figure that the United States could mobilize ten million men if necessary.

Gen. C. L. Corbin, Assistant Quartermaster General, told the National Association of Cotton Manufacturers that the rate of procurement would go ahead at present rates with the Army held at its present strength. It is known that the Quartermaster has on paper contingent alternate procurement programs that are huge, to put it mildly.

Bearing out General Corbin's statement that the present rate of procurement will continue, are several large orders and calls for bids of recent date. On the day of this writing, Army called for bids on 38,000,000 yd. of twills, drills, coat linings, canvas paddings. Bids on 5,600,000 bleached cotton sheets recently were received.

Only three weeks ago, the Army called for offers on 20,000,000 yd. of 18-oz. serge, and 12,600,000 yd. of flannel shirting. Orders were placed recently for 1,981,784 wool blankets. QM was reported, as this went to press, to be on the point of calling for 60 to 70 million yards more of serge and flannel cloth. Private mention was made, too, of impending calls for nearly 30,000,000 yd. of duck, in addition to the $65,000,000 worth in hand or on contract.

One of these calls for offers—the one for the 18-oz. serge and the flannel carried a precedental stipulation. It said that, to get the widest possible distribution of contracts among small manufacturers, a minimum of 25,000 yd. will be stated in the invitations.

There is a rising wave of protest in the trade against the delays sometimes ensuing between opening of bids and awarding of contracts. Formerly 10 days, it now runs to three weeks.

THE QUARTERMASTER'S ORDER says, briefly, that QM awards will be made (1) on a regional basis; and (2) they will be made with price no longer the dominating factor. The announcement does not mention the textile industry, but deals generally with all supplies procured by QM. The program aims to spread defense work among small companies, to re-employ workers displaced by operation of the priorities system, and to make use of all possible production facilities. The Quartermaster states he realizes that wide distribution of contracts will result in increased costs, because small plants may be unfamiliar with and inadequately equipped to produce the items wanted. Within limits, depending on circumstances, "bid prices will not always govern the award of contracts. Direct negotiations will be made with bidders in a particular region where it is desired to make awards, when the bid prices are considered too high. Every reasonable effort will be made to induce such bidders to accept a stated quantity at what is considered a fair price to them." Bids are no longer opened and read publicly.

There is much confused interpretation of this program. One QM official addressed a duck manufacturers group on this subject, affirming its importance to their interests. Another official of the Quartermaster Corps created the definite public impression that contract distribution is important to the textile industry.

This writer is told by high Quartermaster authority that the work-spreading program has only limited effect on textiles. The informant said that the whole contract distribution system of OPM is intended to put back to work men and machines made idle by priorities on materials. Since no lack of major fibers except silk has shut down any textile mill, and because the industry is operating at over 100% of "capacity," there is no need to apply the work-spreading procedure to it.

The middle-ground truth, as near as one can deduce it, is that the contract distribution program *will* affect textiles, especially those items, like duck, that run short of requirements, and are given priorities. No doubt prime contractors listing the most subcontractors will be favored. And, because cost is less a "dominating factor," some small textile firms, hitherto unable to compete with the efficiency and volume of large ones, will get into defense contracting.

There is a proposal, still in the talk stage at this writing, that a joint Army-Navy authority be set up to allocate Government cotton-cloth purchases among manufacturers to equalize distribution and level the peaks in the load. Meanwhile, QM has analyzed the woolen and worsted productive facilities of the country, finding them "ample."

In the circumstances, QM would seem no less than human if it allowed prices to rise by easy stages. But its action on blankets indicates strong inflation resistance. A recent call for about 2,000,000 wool blankets brought offers of from $6.58 to $8.29. QM studied the market, concluded that $6.65 was a fair maximum, accepted offers at near that figure, and negotiated for the rest at that price and got them

—incidentally distributing the orders in New England, New York, New Jersey, Pennsylvania, Michigan, Wisconsin, North Carolina, Georgia, and Oregon. The order was to fill out fiscal 1942.

VISITING AROUND, you get the impression that things are pretty well under control at the Quartermaster's, excepting some confusion peculiar to Washington, and excepting the vat dye situation, which was not improving, as this went to the printer. Responsible officials told representatives of this publication that something must be done—either QM must reduce its requirements, or additional dye-producing facilities must be found. These sources would not say whether the Army would ask for priorities on materials for construction of additions to present dye-making facilities. But it is known that priorities have been considered. And it is said here that dye producers are making every effort to meet requirements to avoid priority control which would take dyes away from civilian customers of long standing. QM is examining its uses of vat dyes with the thought of reducing their application to certain items. Officers would not say what items, but a Government technician stated that they are socks, barrack bags, silesia and albert linings, sleeping bags and other pieces in which fastness is not paramount. Mosquito net has already been taken out of the vat dye list.

Though QM officers admit that there have been no plant shutdowns for lack of dye in the last few weeks, they ask that everything possible be done to relieve the situation. They suggest that dyers order only quantities specifically needed, with reasonable safety margins, as needed, and that they permit partial deliveries. This applies to vat dyes for commercial as well as military purposes. The dye situation is the nearest thing to a new priority problem in the textile and allied industries.

For some months an occasional priority certificate has been issued for moderate improvements and new machines on behalf of the duck industry. The duck situation is indicated in reports here that QM recently tried to procure 20,000,000 yd. of duck, finally got offers on about half of it, and had to take the rest in heavy twills—10.2 oz. or so—to use for tents.

Even so, no contract requiring new construction over $20,000, or new machines over 10% of equipment to be used in performance of the contract, is entered into without consent of the Undersecretary of War. This statement was made by Capt. James E. Baker, of QM, to the canvas goods manufacturers at Dallas convention. This policy is expected to bring about the fullest use of existing facilities, he said. Applications for preference ratings are approved only when urgency of the need is made clear. All contracts for duck and webbing carry an automatic rating of A-1-I; ratings of A-1-b have been authorized in special cases. If a manufacturer cannot complete a QM contract without new equipment, and can so show, a contracting officer will issue a PD-3.

The P-53 maintenance and repair priority order, which was described on page 68 of the October TEXTILE WORLD, has been extended by the Priorities Division of OPM to textile mills that have their own machinery repair shops, just as it has been available to textile machinery manufacturers. The regular rating for maintenance and repair is A-10, but in cases of real need, PD could and might raise this to something better. Application should be made to the Textile Division, OPM, Washington.

Preference ratings for new machinery will be issued sparingly; they are intended primarily for replacement of worn-out equipment. Plants not holding any defense contracts must appeal to the Textile Branch, OPM, for ratings.

MOVING OVER to textile prices, you find that Office of Price Administration ceilings now spread over approximately two-thirds of all primary cotton textiles produced in this country. And more will be covered. Now being studied are wide sheetings, wide drills, wide print cloths, and tickings. Prices of duck and tire fabrics are being eyed closely by OPA.

On Oct. 21, Schedule No. 35 became effective. It covers 13 leading types of cloth made of carded yarn; five of these were moved over from No. 11, the original gray goods schedule, and eight of them are under ceilings for the first time. All 13 are adjusted to spot cotton prices, as reported in October's TEXTILE WORLD. Prices of the new ones are in "proper price relationship" with the carded yarn goods already covered. Combed yarn "fine goods" continue under schedule No. 11. No. 7, the first schedule in textiles, still covers combed cotton yarn. Schedules 11 and 7 both will be geared to spot cotton prices when current studies are completed, along with the 13 items under No. 35.

Late last month came the first real skirmish under Henderson's price ceilings. Cotton took a bit of a drop and some groups in the gray goods trade charged OPA with breaking faith under the terms of schedule No. 35.

You should have a slide rule, and know how to work it, to cope with the arithmetic of No. 35. But the basic formula provides for adjustment, downward or upward, of ½¢ a pound in the price of cloth for every change of 43 points in the price of raw cotton. There is a wide range of figures for various kinds of cloths. Since goods prices hinge on cotton *closing* prices, on ten spot markets, the revision in goods prices, if any, does not go into effect till the following day.

The disagreement seemed to be on the fact, unobserved by some parties on both sides, that the whole range of cotton price points is in brackets of 43 points each. Actually, a change in the price of cloth occurs when the cotton price shifts from one bracket to another, and that shift may be far less than 43 points.

OPA announced Oct. 30 that ceiling prices roughly 15% below present market levels will soon be imposed on finished bed sheets. Administrator Leon Henderson was preparing to invite manufacturers and distributors to meet for discussion of the maximum. He said that prices of bed sheets have risen from 60% to 70% during the last 12 months. The proposed schedule will return prices to the level of the last week of last July, Henderson said.

Possible freezing of general converting charges is being considered by OPA as part of a plan to restrain wholesale and retail prices.

A WHIRLWIND OF PRICE excitement took rayon yarn up for a spin, but set it down right where it started from, which is news on Washington's new price ticker. About mid-October Mr. Henderson announced that, as a result of action by a leading maker in raising quotations on acetate yarn above levels previously determined as "reasonable" by OPA, maximum prices would be established. Meetings were held with leading manufacturers. Headlines had the price lid on tight. But as the month closed, Henderson announced that new acetate yarn prices set up by the Celanese Corp. of America removed present necessity for issuing a price ceiling. He warned, however, that a ceiling would be put on if any other advances showed up. Higher yarn prices would seriously disturb the price structure of all rayon fabrics, which are already under a ceiling.

On Oct. 24, Mr. Nelson, as Director of Priorities, took the last double-half hitch on silk; he ordered everybody who owned title to any raw silk in unbroken bales to so inform the Textile Division of OPM.

Incidentally, Quartermaster has practically eliminated silk, except for banners; wouldn't care if no more came in. Now it all belongs to Army and Navy Ordnance, and to Army Air Forces.

C.T.I. Holds 15th Annual Meeting

Note of warning on distributors' stock tempers optimism of some speakers

PRACTICAL ECONOMICS, effective aids for cotton, and valuable pointers on wartime regulations of industry—plus a fifteenth anniversary banquet where serious matters were taboo—provided those who attended the annual meeting of the Cotton-Textile Institute on Oct. 30 and 31 in New York with lots to think about.

The annual address of Dr. Claudius T. Murchison, C.T.I. president, made a plea for the utilization of trade association facilities in Washington's contacts with industry. He also made a plea for inventory control through statistics on conditions beyond the primary market, warning that accumulation of stocks by distributors, though perhaps reasonable and proper for an individual, become a topheavy and dangerous position when undertaken by everyone.

Goldthwaite H. Dorr, in opening the session, spoke briefly of the Institute's 15 years during which the difficulties it overcame were its breath of life. He pointed out that recently it had been building a new conception of the relation between the manufacturing industry and the interests which precede it. An objective for the next few years can well be an extension of this to include the interests which follow.

Prof. Sumner H. Slichter, of business economics department at Harvard, was one of the two prominent economists who spoke. He stressed the fact that business and industry must do a good job of controlling the cost of living. Already prices have risen rapidly, he pointed out. In the first two years of World War No. 2 raw materials and farm products have risen percentage-wise much higher than in World War No. 1, yet finished-product prices in the current war have not risen so much as on the earlier occasion. He pointed out that since half of the country's income comes into the hands of those receiving $1500 or less annually who were untouched by income taxes, a special drive should be made to sell them Class E bonds, for the purpose of diverting a part of that income away from purchasing power into savings. He suggested that labor unions be the medium for the sale of such bonds.

Unless the worker can be protected against run-away living costs, said Prof. Slichter, there is no basis for a national wage policy, and there must be such a policy to make sure that one mediation will be governed by the same principles that govern another. He expressed belief that post-war readjustment can be made more easily than most suspect because war develops tremendous shortages and technological research will assist the eventual peace-time readjustment. Our 3,000,000 individual business enterprises are 3,000,000 centers of initiative, our country's outstanding asset, he said.

The other economist, Harold G. Moulton, president of Brooking's Institute, stressed the recent sharp gains in prices of farm products, which come not so much from supply and demand as from Governmental policy of pegs and loans. In proposed price legislation, he believed the importance and influence of this farm product situation had not been recognised. The textile industry, he agreed, had alternate feast and famine, and needed a longer-run outlook for more orderly distribution.

The voice of OPM came from Washington in the persons of R. R. Guthrie, chief of the Textile, Clothing and Equipage Division and Samuel R. Palmer, consultant on priorities. Mr. Guthrie explained that OPM represented business, and its aim was to coordinate purchases so that industry could get what it wanted when it wanted it, provided there was no conflict with the interests of the Defense Program. He analysed the workings of his division and urged manufacturers to write to him relative to any difficulties they may have in obtaining materials.

Mr. Palmer talked on the pattern of priorities and the use of various ratings. He noted a trend toward direct allocation of materials. On maintenance supplies, it is the aim, he said, to help manufacturers keep their plants in proper shape whether on civilian or defense operations, but no expansion solely for civilian use would be allowed. He touched on the inventory survey as a means to know where everything is, probably involving a weekly report.

Both OPM speakers agreed on this message—"If you don't get repair parts, write to us, explaining how keen the need is."

MAXIMUM SERVICE to the national defense program must be cooperative and concerted in nature, Claudius T. Mur-

FASHION SHOW directed by Miss Virginia Jewel (extreme left) at C.T.I. luncheon. Three models are showing cotton sports wear

OPENING 15th ANNUAL MEETING—Chairman Dorr (center) flanked by President Murchison (right) and Prof. Slichter (left)

chison, president, stated in his address. "But such cooperation can not be made complete merely by wishing it, or by requesting it," he continued. "It must be implemented by administrative machinery operated by experienced hands. In its trade associations the industry has such machines. They are the product of long years of careful building.

"We have urged upon the Government the use of industry committees in connection with the national defense emergency. We are truly grateful for all those instances in which this desire has been complied with. The committees so used have given loyal, devoted, and efficient service often at great sacrifice of time and personal attention to their respective businesses. But with all of our appreciation of this policy we feel that the trade association has a potential usefulness in the present situation which has not yet been recognized."

Referring to the matter of priorities, Dr. Murchison stated:

"Our industry has struggled long and hard to obtain a preference rating on maintenance and repair parts for mill machinery. But, unfortunately, most other industries have done the same thing and consequently the stage has been reached where a priority rating of A-10 leaves much to be desired. The large-scale granting of priorities, therefore, has led to the belief that to a large degree they will be supplanted by the use of allocations. If we must eventually depend on allocations for machinery repair parts, and mill supplies, surveys of the industry as a whole would be a prerequisite to intelligent action. Certainly in many instances the trade association would be the best means of assembling and analyzing such information.

"It is doubtful that the Government itself could undertake to recruit, organize and train the great army of inspectors and census takers which it would need if the alternative method were resorted to."

Dr. Murchison placed special emphasis upon the need for avoiding speculation in the textile markets, and upon the corollary need for integrated statistics which would reveal the supply and demand situation not only among mills but in the distributing markets:

"Ordinarily we think of speculation as a normal feature of a boom period. However, I seriously question that speculative activity as such is important in our industry at the present time. Certainly no appreciable trace of it can be found in the statistical positions of the cotton mills.

"But, unfortunately, the mills are only a portion of the cotton textile industry. For the purpose of any analysis having to do with stability the industry must be defined as including all processors and handlers who use the products of the mills. From the standpoint of the mills these groups to whom I have reference are buyers.

"I do not know and do not believe that any of these groups are engaged in any speculative activity as such. It is my purpose only to call attention to certain policies and practices which, when taken separately, are wholly legitimate and perhaps justifiable but which, taken collectively, may ultimately prove dangerous. When fears and uncertainties point in the direction of higher costs and limited supplies buyers respond in well-established ways.

"The mills are to be complimented on their merchandising policies of this period just as they are to be praised for their extraordinary success in enlarging production. I sincerely hope that the preachings and the events of the coming months will not be strong enough to divert them from this course. But however correct mill policies will prove to be they are not in a position to prevent developments in other quarters which may prove dangerous. The larger responsibility is in the hands of the subsequent processors and distributors. Their motives will be blameless, their business judgment may be good, and the quality of their management may be without fault, but almost without exception they are suffering from lack of dependable information regarding their group operations.

"The whole area from Worth Street to the Crossroads Store is and has been a virtually complete blackout so far as the volume, the flow and the disposition of the various types of cotton goods are concerned. Within this area individual experience based on the facts of a single enterprise has but little value for the purpose we are discussing. The important thing is to know what others are doing, not as individuals but as a group.

"It is of no consequence when a single individual enlarges his stocks 50% above the usual ratio to sales but it is of the greatest consequence when the entire group which he represents does the same thing. Hence it is absolutely necessary that each should know the basic facts of the others if he is to protect himself and, at the same time, add his weight to the maintenance of economic stability.

"If these other groups can find a way to procure such information they will be doing the industry and the entire country a great service, as well as themselves. The post-armament readjustment or, worse yet, the post-war readjustment, must ultimately be faced. Those who would say 'Let us cross that bridge when we come to it' may find that the bridge is blown up. At that time we would not wish it to be democracy 'For Whom the Bell Tolls.'"

SPOKESMEN FOR THE COTTON FARMER were headed by Senator Walter F. George of Georgia, and the session was presided over by O. Max Gardner, former governor of North Carolina. Senator George, who is also chairman of the Senate Finance Committee, said that although textile prices had increased he did not believe that they had increased out of line. "Your costs have also increased," he said, "the costs of your raw commodity and of supplies.

(*Continued on page* 158)

No Let-Up in Textile Output Yet

Rate for first three quarters of 1941 was 40% over 1940—BUT watch your step!

By DOUGLAS G. WOOLF

THE RECORD-BREAKING RATE of textile production continued during the third quarter of this year with the result that the total for the first three quarters of 1941 was 40% higher than that for the corresponding period of 1940. TEXTILE WORLD's index of textile mill activity for the nine-month period of 1941 is 187 (on the basis of 1923-25 as 100), against 142 for the year 1940 and 132 for 1939. Thus these three years have set up three successive new records for this industry.

By individual fibers, wool is still making the best comparative gain over 1940, the consumption for the first nine months of this year being 66% over last year. Cotton is ahead of last year by 37%, rayon staple by 30%, and filament rayon by 18%. Silk, of course, did a fade-away act in August; the deliveries for the first three quarters of 1941 were 12% below those for the corresponding period of last year.

40% AHEAD of last year, which in turn had been a record high year! It's thrilling enough. But it's also frightening.

Once more, at the risk of being called a lot of hard names (including the apparently horrible title of "a well-fixed business man") as we were in a letter printed in these columns last month, we remind our readers that this production level cannot continue, without the danger of preparing the scene for eventual collapse. This industry can go all-out for national defense, without also going all-out on a speculative spree. And yet the latter is in the making now.

TEXTILE WORLD'S Textile Mill Activity Index

(1923-25 Average=100)

1929	115	1935	105
1930	89	1936	124
1931	93	1937	125
1932	83	1938	103
1933	104	1939	132
1934	90	1940	142

1941 (first three quarters)..187

We have been sounding warnings on this point since last May. "It is to laugh," was the general reaction to those warnings. But within the last few weeks, the possibility that there might conceivably be an awakening has found expression among a few brave souls.

Here are some straws:

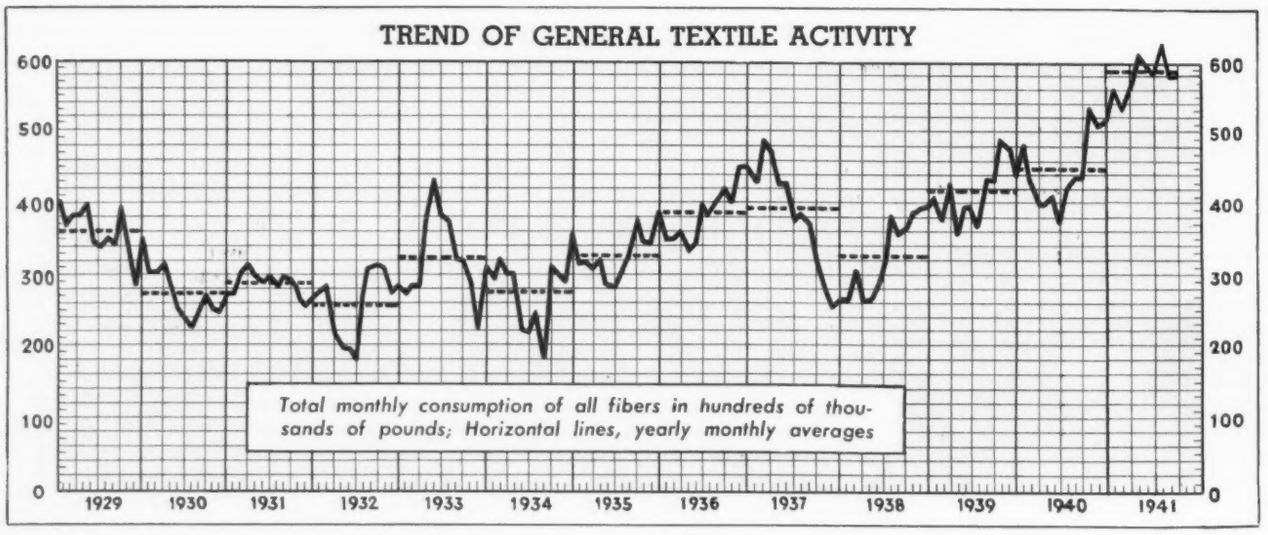
"Seller's market is held near end," says head-line in New York *Times*, and the article starts off: "The textile industries, which were the first to give an indication that the recovery of 1936 was 'turning sour' and the recession of 1937 was on its way, gave indications last week of moving into uncertainty and it was freely suggested that the very definite seller's market that had been fostered by the twin influences of defense buying and expanded public purchasing power was nearing its end."

The New York *Herald-Tribune* remarks: "Business moves into the final quarter of 1941 with industrial activity at an all-time peak, yet all is not serene on the economic horizon. Raw materials are not so plentiful, some civilian industries are beginning to curtail output and warnings of heavy unemployment to come are heard . . . Moreover, what is happening now is only the beginning."

Herman Cone, president of Proximity Mfg. Co., in a frank letter to the mill paper *The Textorian*, said: "Supplies and materials of all kinds that we need for the manufacture of our products are getting more and more difficult to obtain, and I am afraid that the time is coming when we will not be able to secure enough to keep us running at the present rate."

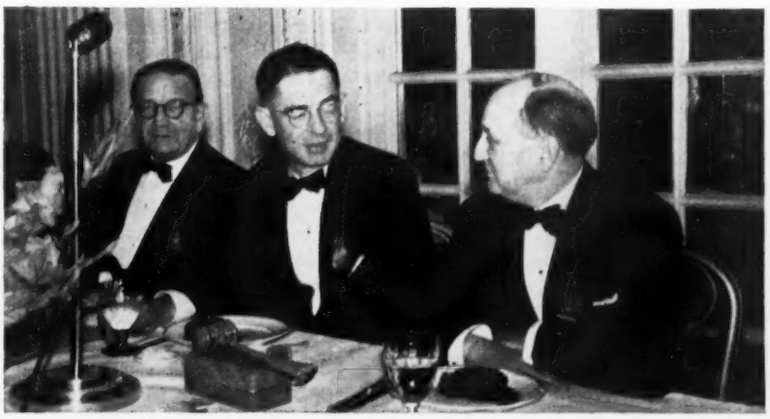
Our Washington Bureau says: "It now is being predicted that the cotton textile industry cannot continue much longer at its present pace."

Read 'em now, and maybe you won't have to weep later.



N.A.C.M. Principals in Action

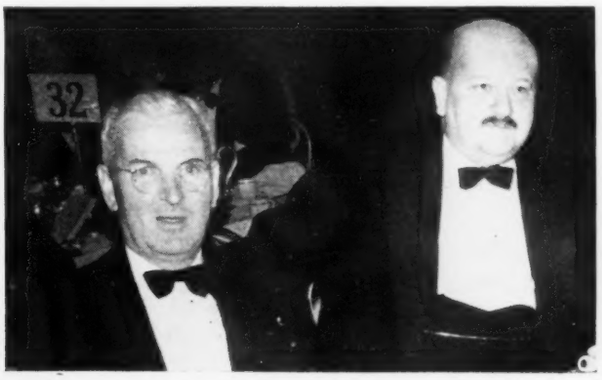
Views at annual meeting in Boston, reported in last issue, show leaders



The three banquet speakers: (left to right) Brig. Gen. C. L. Corbin, assistant quartermaster, U.S.A.; Russell T. Fisher, president, N.A.C.M.; W. N. Banks, president, A.C.M.A.

A team from the Textile Foundation: Edward T. Pickard (left), secretary; Franklin W. Hobbs, chairman.

Someone's joshing him: Claudius T. Murchison, president, Cotton-Textile Institute at N.A.C.M. meeting.



Among the banqueteers: Kenneth B. Cook, Manville-Jenckes Corp., Manville, R. I., and Johnfritz Achelis, Commercial Factors Corp., New York.

Presided at morning session: J. Frank Morrissey, of Interlaken Mills, Fiskeville, R. I.

Speaking on Price Control: Ralph E. Loper, textile cost authority, telling audience at afternoon session about work of OPA. At center of table is Robert Amory, who presided at session, and at far right is W. N. Banks, A.C.M.A. president, a visitor from the South.

Chemists Study Defense

Also hold inter-sectional contest and session on hosiery at annual meeting

PREDOMINANT at the 21st annual meeting of the American Association of Textile Chemists & Colorists, held Oct. 31 to Nov. 1, at Pinehurst, N. C., was the discussion of problems arising from the present national emergency. Two of the four technical sessions were devoted almost wholly to consideration of defense matters, and several papers presented at the other sessions had a direct bearing on defense problems. Another highlight of the meeting was an intersectional contest at which New York Section won highest honors for a paper: "Cotton Fabric Construction in Relation to Water Resistance."

The major problem of the chemical manufacturer today is one of production, according to Dr. D. H. Powers, of Rohm & Haas Co. He is meeting the emergency by increasing his production to its limit. He is developing new processes and new products for defense needs and for civilian use to fill in the severe shortage of fibers and fabrics.

If it were not for the tremendous defense needs, civilian plants would scarcely notice the withdrawal of the imported chemicals and materials which a few years ago the textile industry considered essential. But today the chemical industry is caring first for defense needs, which are steadily growing, and then supplying as much as possible of the materials necessary to keep running the more important and more essential civilian processes.

"Our emergency is now here; troublesome days are ahead," stated Albert E. Sampson, first speaker at the session on textiles and national defense. For a quarter of a century the dyestuff industry of America has been preparing to fulfill an essential and a patriotic duty. It is possible to make the dyes that meet the exacting specifications of our Army, Navy, Marine and Aviation units, and the wide variety to serve the needs of a critical public. The dyestuff industry of America pledges itself to "Keep 'em dyeing".

Discussing defense problems for the mill man's viewpoint, Winn W. Chase, associate editor, TEXTILE WORLD, asserted that the most serious problem is the growing tendency toward complete Government control of business as exemplified by the priorities system and arbitrary setting of price ceilings. To counteract this, a plan has been proposed for self-regulation of business which can be described briefly as a 1941 model N.R.A., representative of both management and labor and integrated into OPM. Another serious problem is the shortage of various fibers, yarns, metals, chemicals and other materials needed to supply military and civilian requirements. The speaker recommended that the A.A.T.C.C. act as a clearing house for the collection and dissemination of information on those chemicals which are difficult to obtain.

Speaking on the purchase and inspection of textiles for the Army, Lieut. Col. Vere Painter, U. S. Army, stated that the Philadelphia Quartermaster Depot has, within the past year, become the world's largest purchaser of textiles, having purchased at least 90% of all textiles required for National Defense purposes. Purchases during the past fiscal year amounted to 25 times the amount purchased during the preceding year.

"It has been truthfully said that the enlisted men in the United States Navy are the best dressed sailors in the world," asserted Lieut. R. G. Buck, U. S. Navy. Inasmuch as the Clothing Depot has only small funds available for experimental purposes, it must depend to a great extent upon the generosity of manufacturers and suppliers to do most of the experimental work on improved fabrics and finishes. Specifications are drafted, changed, and revised only after extensive tests.

Production of modified wools which are resistant to attack by moths, bacteria, mold, alkalis, and various other chemicals was described by Dr. Milton Harris, director of research for the Textile Foundation. The process consists essentially of converting the relatively unstable disulphide cross-links in the wool fiber to a more stable type of cross-link. The modified wool, when made available commercially, will undoubtedly be of interest to the Army and to other large users of wool.

DYEING OF ARMY SOCKS was discussed by S. M. Hamilton, of Holeproof Hosiery Co., the first speaker at the session on hosiery. Mr. Hamilton stated that dyeing of half hose to meet the rigid specifications of defense contracts has made it necessary for the hosiery mills working on such contracts to develop an entirely new technique of hosiery dyeing. The fastness requirements for the tan shade necessitate use of vat colors. The dyes employed are the dispersible types. The dyeing procedure consists of padding the insoluble dyes into the goods and then the reduction of the dye in the fabric. Good results call for careful selection of color, penetrants, reducing agents, retarding agents, and leveling agents.

How the throwster serves the hosiery industry without silk was outlined by George A. Urlaub, textile consultant. The speaker pointed out the basic differences between silk and rayon and explained the methods of handling oiling and soaking for knitting purposes. He then described yarn sizes, constructions, and twists for weaving and knitting yarns, as well as the effect of mixing rayon with other fibers.

Reviewing the progress in dyeing Nylon hosiery, P. H. Stott, of E. I. du Pont de Nemours & Co., explained some of the reasons why acetate colors have proved to be generally satisfactory for this purpose. He then described methods for selection and evaluation of dyes for Nylon hosiery as based on a study of the mechanics of the dyeing process, with emphasis on exhaustion speeds of dyes used together to produce the desired shades and upon the migratory properties of the dyes, which tend to reduce unevenness.

"With the freezing of silk, there is a vital need for closer cooperation between manufacturers and dyers of full-fashioned hosiery," stated Joseph Kelly, of May Hosiery Mills. The dyers should be more fully informed as to what fibers and what combination of fibers are being put into hosiery, so they will know how to dye it. Likewise, the manufacturers should be informed by the dyers what fibers should be knitted, so that they can be dyed properly.

Dyeing and finishing of full-fashioned hosiery made from fibers other than silk were discussed by Virgil Hartquist, of Wayne Knitting Mills. Although cotton and rayon have been used in various combinations for a period of years, their use has been confined to extremely low-end numbers. Now these combinations must be dyed and finished to standards of people purchasing higher-priced merchandise. Difficulties present themselves immediately after manufacturing when the cotton and rayon used in conjunction with Nylon are subjected in preboarding to abnormal high temperatures and pressures of steam. Detergent chemicals must be examined, because rayon throwing oils

are totally different from those used on silk. Temperatures for dyeing cotton must be altered in the presence of Nylon, and new methods and auxiliaries will be needed. However, the greatest need is the proper selection of dyes for combination of cotton, silk, Nylon, and viscose, acetate, and cuprammonium rayon.

Speaking on the hosiery situation today and the outlook for tomorrow, Earl Constantine, president of the National Association of Hosiery Manufacturers, described the effect of the sudden stoppage of silk shipments to this country with the consequent dislocation of the silk hosiery industry.

As regards continued use of silk in hosiery, he predicted that mills will exhaust their present stocks in December and that by March, 1942, the last all- or part-silk hosiery will have passed through retail channels. Upon resumption of friendly relations with Japan, he further stated, silk again will find wide use in hosiery, but will not regain its former position.

INTERSECTIONAL CONTEST. Winner of first prize in the intersectional contest was the paper on influence of fabric construction on results obtained when cotton cloth is processed to obtain water resistance. This paper, presented by the New York Section and read by P. J. Wood, of Royce Chemical Co., described the results of a cooperative research in which more than 50 constructions of treated cotton fabrics were subjected to a series of tests. Among constructions included were twills, poplins, gabardines, and broadcloths. Samples mill processed under controlled conditions by two different methods were subjected to spray immersion, impact-immersion, air-porosity, and hydrostatic tests. As a result of the investigation it now should be possible for cloth manufacturers to determine suitable counts of yarns and cloth constructions for fabrics which are to be subjected to water-resistant treatments. Finishers should now be able to predict the overall value of water-repellent finishes on fabrics of different constructions. Further, the information made available by the study should lead to improvements in water-resistant fabrics required for military and other purposes.

An improved method for evaluation of finishing agents for treatment of fabrics to be Sanforized was recommended in a paper presented by the South Central Section, and read by Andrew J. Kelly, of Burkart-Schier Chemical Co. The method proposed is a modification of the canvas-disk wetting test.

Consistent reproducibility of results in testing vat-dyed cotton for fastness to the hypochlorite bleach calls for more careful control than is specified in present tests, according to a paper presented by the Philadelphia Section, and read by Charles A. Seibert, of E. I. du Pont de Nemours & Co. Among conditions which require strict control are liquor volume ratio, pH temperature during testing, removal of residual chlorine remaining in the tested specimens, and temperature and conditions of drying after testing. This paper was awarded second prize in the contest.

THOMAS R. SMITH, Wiscassett Mills Co., nominated for presidency of A.A.T.C.C.

CHARLES A. SEIBERT, E. I. duPont de Nemours & Co., nominated for vice-presidency

ROLAND E. DERBY, the Derby Co., again nominated for the vice-presidency

THE QUESTION OF SHORTAGES of various materials used in textile processing and some of the methods and products which have been developed to counteract these shortages were discussed in a paper presented by the Rhode Island Section, and delivered by Thomas H. Roberts, of Arnold, Hoffman & Co. Among the materials mentioned as being scarce are certain starches, gums, dextrines, oils, fats, and waxes which formerly were imported. Suitable substitutes for these include domestic starches which have been modified by chlorination, acetylation, or in other ways; soluble cellulose ethers; water-soluble resins; casein; cationic softeners; corn oil; peanut oil; and synthesized oils and waxes.

A progress report on the processing and utilization of domestic flax was presented in a paper by the Southeastern Section. Preliminary tests indicate that the fiber can be easily worked on cotton equipment and that blends with cotton afford interesting novelty effects. Third prize in the intersectional contest was awarded to this paper.

Relative exhaustion of vat colors in the pigment-pad method of jig dyeing was considered in a paper presented by the Piedmont Section, and read by C. Norris Rabold, of Union Bleachery. The paper described a method for making exhaustion tests, listed various vat colors according to their rate of exhaustion, and showed how proper selection of vat dyes results in better matching of shades and elimination of end taper.

Prediction and control of colored fiber blends was discussed in a paper presented by the Northern New England Section, and read by Dr. Seibert Q. Duntley, of Massachusetts Institute of Technology. A new method makes it possible to determine whether the colored fibers available can be used to match a given shade and, if so, the proportion of each required to secure the match.

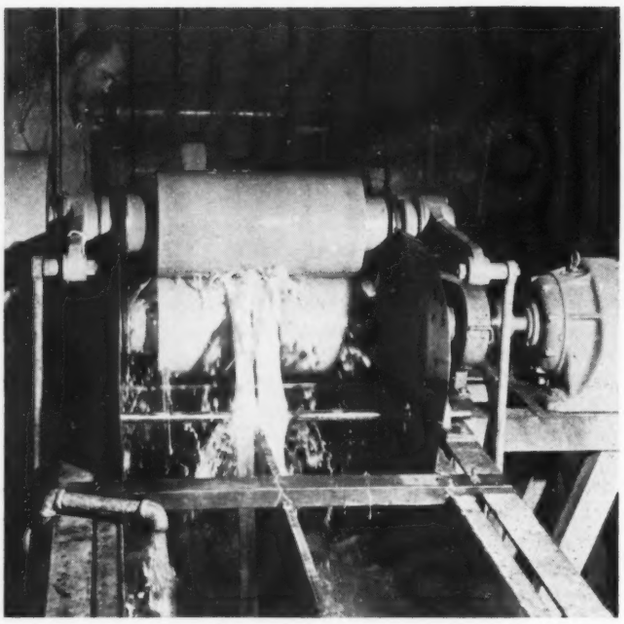
At the light-fading clinic, E. H. Harvey, of Atlas Electric Devices Co., discussed fundamental concepts in Fade-Ometer design and operation; C. G. Ollinger, of National Carbon Co., described the "Sunshine" carbon arc lamp; and I. J. Glenn, of Sidney Blumenthal Co., presented a report on the difference between accelerated fading tests, actual Florida sun tests, and roof tests made at Shelton, Conn.

Speakers at the banquet included Carl Z. Draves, president of A.A.T.C.C.; William M. McLaurin, secretary of the American Cotton Manufacturers Association; and Clyde R. Hoey, Ex-Governor of North Carolina. Douglas C. Newman, of E. I. du Pont de Nemours & Co., acted as toastmaster.

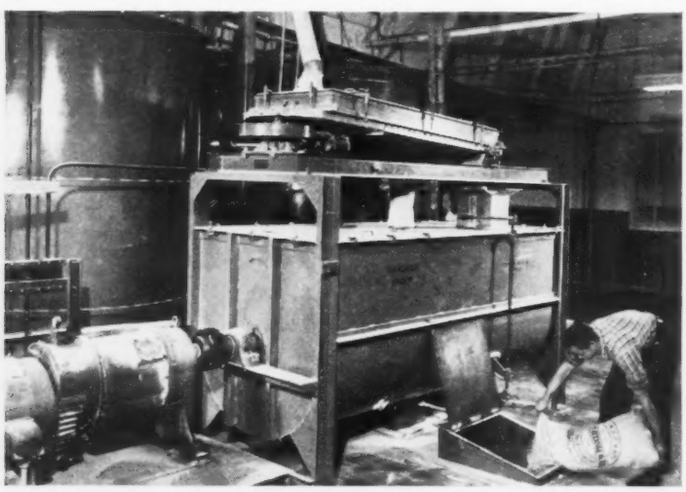
Fibers From Milk

COMMERCIAL PRODUCTION OF ARALAC, a protein fiber, made from casein, was announced on Nov. 8, by National Dairy Products Corp., 230 Park Ave., New York. Now being made available to textile mills, the new fiber is the culmination of four years' experimentation by Atlantic Research Associates, a division of National Dairy. Aralac can be blended with wool, mohair, cotton, spun rayon, and other fibers; spun into yarns; and woven or knit into fabrics for various apparel and other uses. Fabrics containing Aralac are said to have distinctive characteristics, highly desirable for some purposes. Extensive tests made by the producer indicate that Aralac has satisfactory resiliency, tensile strength, resistance to abrasion, freedom from odor, and affinity for dyes.

The fiber is made at Taftville, Conn., by Aralac, Inc., a special manufacturing division established by National Dairy for that purpose. Present production capacity is about 5,000,000 lb. a year—the recoverable casein content of approximately 160,000,000 lb. of skim milk. The accompanying illustrations show various steps in production of the fiber.



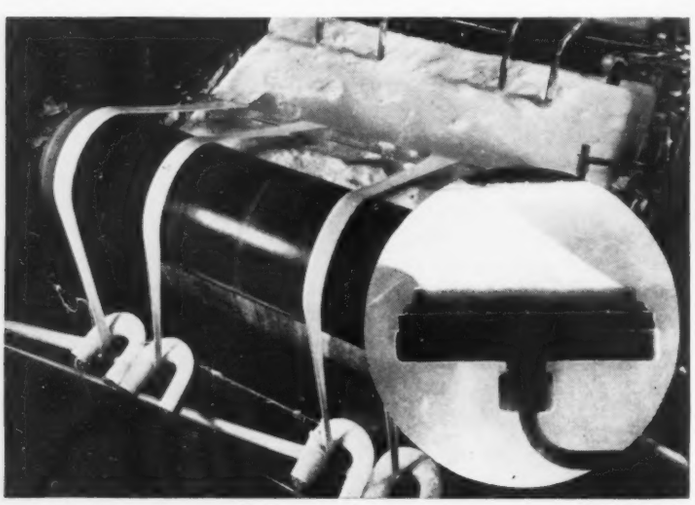
One of several washing processes in making Aralac fiber. Chemicals in wash water are recovered for re-use



Ground casein is mixed thoroughly to provide uniformity, and drawn out of the bottom of the mixer into huge vats, one of which can be seen in the left background. Then it is treated with chemicals and dispersed into an emulsion, ready for extrusion through spinnerets

On this machine the long continuous strands are cut into fibers of the desired lengths

Four spinnerets are immersed in each tank and four tape-like strips emerge from the foamy mass. In each of those four strips there are thousands of strands of Aralac fiber. Insert shows close-up of fibers emerging from spinneret



The cut fibers are pressed into bales, encased in heavy paper, and wrapped in burlap ready for shipment

1942 Knitting Show in Atlantic City

Event to be held biennially thereafter; Dates next year to be April 27 to 30, inclu.

KNITTING ARTS EXHIBITION will be held at Atlantic City next spring. For the first time in its long history it will leave Philadelphia, and, with its associated conventions, committee meetings, etc., it will draw textile men to the Atlantic City Auditorium and Convention Hall on April 27, 28, 29 and 30, 1942. It will open on Monday and close on Thursday as it did last spring.

Executives of the National Association of Hosiery Manufacturers, the prime sponsors of the event, are enthusiastic over the facilities available at Atlantic City. The floor plan used in the Commercial Museum can be set in the Auditorium and room to spare will be left for growth. Already 68% of the floor space has been spoken for at this new location. Rooms for meetings, luncheons, etc., are convenient and attractively furnished.

FURTHER IMPORTANT decision reached by the board of directors of the hosiery association and supported by a canvass of exhibitors is to hold the show biennially in the future, alternating, as it is now arranged, with the Southern Textile Exposition. Thus Knitting Arts will be held in 1942, 1944, etc., while the Southern show may be expected in 1943, 1945, etc.

Because of the natural advantages of Atlantic City it was decided to select dates as late as possible yet still keep the event in the month of April, and the calendar accommodated by making the last four days of the month the proper portion of a week for the show. It is expected that the new location, the fact that there will not be another knitting show for two years, and the acute problems of the present time will draw record crowds to examine what the exhibitors have to offer and to attend the meetings of the hosiery and underwear groups.

General view of Atlantic City Auditorium

Urge Intertrade Statistics

CREATION of a central intertrade statistical office by the textile industries and related trades, to provide statistical guides which would apprise manufacturers, converters and distributors of impending market changes, is proposed in a report on a study of Inventory Trends in Textile Production and Distribution, just published by the Textile Foundation.

After analyzing the advantages and disadvantages of various inventory policies in practice, the report points out that a substantial portion of the inventory problems which have beset textile mills during the past decade arose from a general failure to perceive impending market changes and adjust operations accordingly.

The report is the last in a series of seven under the general title, Inventory Policies in the Textile Industries, based on studies conducted for the Textile Foundation by Wharton School of Finance and Commerce. The six preceding reports, which are cited as references in the final publication, deal with studies of inventory management in the denim, men's wear wool fabrics, cotton fine-goods, rayon weaving, cotton print cloth, and full-fashioned hosiery industries, which have been referred to before in these columns.

Copies of the latest 70-page study, as well as others in the series, may be obtained at 50¢ each from the Textile Foundation, Industrial Building, National Bureau of Standards, Washington, D. C. The Foundation also is accepting orders for the entire series at $3.00.

Fabrics For National Defense

Elastiques called for by Army; data on silesia lining cloth and woolen suiting

TWO TYPES OF ELASTIQUE have been called for by the Army in recent bid invitations. Both are 18-oz. fabrics. One is covered by specification No. 8–109, with certain amendments and exceptions. Below is an abstract of principal requirements which the fabric must meet, plus certain manufacturing suggestions not included in the specification.

Stock—Fleece and/or pulled wool not lower than 64s grade.

Yarns—Spun on worsted system; warp, two-ply; filling, single or two-ply, of same diameter as warp yarn. [Although not stated in the specification, use of 2/38s (worsted count) warp, and 1/18s (worsted count) filling—with the fabric layout and finishing procedure described below—should yield a satisfactory fabric.]

Physical requirements — Minimum width exclusive of selvages, 56 in.; in shrinkage in sponging tests, cloth must not shrink over 8% warpwise, or to less than 56 in. in width exclusive of selvages. Minimum weight per linear yard, 17.5 oz.; minimum ends and picks per inch, 116x76; minimum breaking strength (1x1x3 grab test) 140 lb. warpwise, 75 lb. fillingwise. Weave $\frac{4\ 1\ 4\ 1}{2\ 2\ 1\ 1}$ right hand steep twill, moving up in two's. [Although not stated in the specification, using the yarns listed above and the finishing procedure described below, the following fabric layout should yield correct finished fabric: 6,500 warp ends (plus selvage) reeded five ends per dent in an 18¾-dent reed 70½ in. in width; 73 picks per in. at loom.]

Color — Olive-drab, produced by blending olive and white wools. Must show good fastness to weather.

Finish—Thorough scouring, light fulling. Face clear and closely sheared. Use of finishing or loading materials to increase weight or breaking strength prohibited. [Although not stated in the specification, the following finishing procedure is suggested: full to 54½–55 in. in width, scour, dry at 57 in., steam brush, shear, and press.]

For nurses uniforms, Army has standardized on 12 oz. woolen covert, in dark and medium blue; for waists, blue and white broadcloth; for ward dresses, white poplin, and blue and white seersucker

THE SECOND ELASTIQUE fabric for which QM is calling is covered by tentative specification P.Q.D. No. 32. Data on requirements for this cloth follow:

Stock—Fleece and/or pulled wool not under 64s grade.

Yarn—Spun or worsted systems; both warp and filling two-ply. [Although not stated in the specification, use of 2/40s (worsted count) yarn for warp and filling—with the fabric layout and finishing procedure described below—should yield a satisfactory fabric.

Physical Requirements — Minimum width exclusive of selvages, 56 in.; in shrinkage in sponging test, cloth must not shrink over 8% warpwise, or to less than 56 in. in width exclusive of selvages. Minimum weight per linear yard, 18 oz.; minimum ends and picks per inch, 124x80; minimum breaking strength (1x1x3 grab test) 140 lb. warpwise, 80 lb. fillingwise. Weave $\frac{4\ 1\ 4\ 1}{2\ 2\ 1\ 1}$ right hand steep twill, moving up in two's. [Although not stated in the specification, using the yarns listed above and the finishing procedure described below, the following fabric layout should yield correct finished fabric: 7,000 warp ends (plus selvage) reeded five ends per dent in a 20-dent reed 71 in. in width; 76 picks per in. at loom.]

Color — Olive-drab, produced by blending shades of olive with white wool. Must show good fastness to weather.

Finish — Thorough scouring, light fulling. Face clear and closely sheared. Use of finishing or loading materials to increase weight or strength prohibited. [Although not stated in the specification, the finishing procedure outlined above should give satisfactory results.]

SILESIA LINING CLOTH. used for fly linings of trousers and button facings of shirts, is covered by U. S. Army Specification No. 6-18C. The specification calls for an evenly woven cloth which is clean and free from imperfections affecting appearance or serviceability, and which is woven from cotton yarns which are thoroughly cleaned, well carded, and evenly spun. Single yarns are specified for both warp and filling, but a parenthetical passage states that 2-ply yarns are acceptable.

Color shall be an approved shade of either olive drab or tan, as specified in the invitation to bid, shall be evenly dyed with vat dyes, and show good fastness to crocking, perspiration, and dry cleaning. The cloth shall be closely singed, mercerized, and free of sizing.

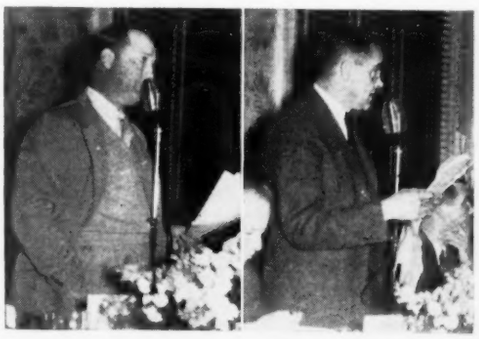
Physical requirements of the finished fabric are: 36 in. minimum width, 72x74, 5 oz. minimum weight per sq. yd., 55x40 lb. minimum strength when tested by 1x1x3 grab method. The weave shall be a 1 up, 2 down twill either to the right or to the left.

The gray cloth is known as a carded, single-yarn, 3-leaf, filling twill, and two constructions commonly used are: (1) 39 in., 68x80, 3.00 yd. per lb., 24s warp and filling; (2) 40 in., 68x80, 3.50 yd. per lb., 24s warp and 30s filling. In these two constructions the twill usually runs to the right. The first construction was used to meet the original tensile-strength requirements, which were 60 lb. warp and 60 lb. filling.

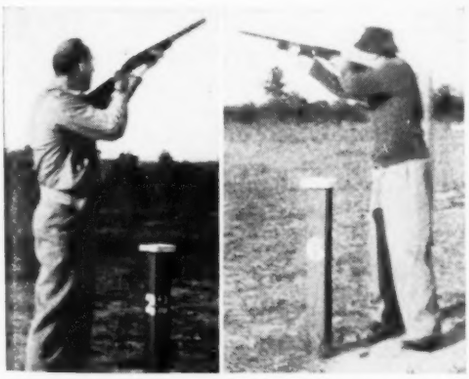
Carolina Yarn Men in High Spirits

Four hundred and fifty members and guests registered at the Carolina Hotel, Pinehurst, N. C., Oct. 23 to 25 for the Twelfth Annual Invitation Outing of the Carolina Yarn Association.

Gordon Hope, president, and John Sherrill, chairman, entertainment committee, presided with other officers and committee chairmen at the head table Saturday night when the banquet was served.



Bob Baker (left), chairman golf committee, gave prizes to the fortunate golfers and Bill Dodson was the Santa Claus for the Skeet Shooters. Sixty sharpshooters entered the contest this year, paced by such able marksmen as Joe Mason, and Bill Dodson, chairman of this branch of sports.



Joe Foil shoots from No. 2 stand and H. T. (Coke) Cosby knocks 'em down from No. 6.

Joe Mason and A. R. Hoover, Jr., await their turns, with irons ready.

There are plenty of others waiting, including B. J. Faucette in the foreground. Top Flight prize was captured by Jim Weeks. Top prizes on flights B, C, D, and E went respectively to Joe Ballentine, C. T. Stowe, R. P. Smith, and Bill Wheeler.

H. Neubert took the first net prize for 36 holes of golf and holds the silver trophy. Others among the first ten winners were: Frank Bowers, W. A. Traver, Jr., Al Bensing, O. F. Long, Neilly Hunter, Karl Ginter, Darden Hampton, and J. N. Atkins. There were in addition to these, seventy-three other prizes awarded, the last and liveliest, a real live William goat going to Leroy Bartels for highest gross on 36 holes. There were altogether three hundred and twenty optimists registered for honors in golf. The difficult No. 2 course eliminated quite a few; Father Time accounted for several others, but the ideal weather, and the excellent condition of the greens and fairways tempted most of them to go through to the end.

This four-some took it standing up, Dudley Bryan, John Bassill, George Schottland, and Bill Yaters, while

J. G. Halsey, Henry Kelley, J. H. Bumstead, and George Storm rested between games. There were others who were willing to rest including this group on the club house steps with

Sam Diggle on the left explaining why they could not all win prizes. With Sam are (front row) T. N. Hunter, Donald Fisher and Al Bensing. Behind, E. Kieswetter and Raleigh Reese.

Botany Boosts Ties by Television

Animated cartoons keyed to daily weather reports stress wool tie merit

TELEVISION came one step nearer to acceptance by the textile industry as an advertising medium last month when Botany Worsted Mills went on the air as sponsor of a televised commercial program. Apart from the aspect of this program as one of the first commercial uses of television by a textile firm, the program itself also sets a new mark for television technique. It is in animated-cartoon form, which signals the first commercial use of this type of entertainment in television.

The program, which is devoted to promotion of Botany neckties, is presented nightly over the National Broadcasting Co's station, WNBT, from the Empire State Building, New York; it averages a distribution of 40 miles, reaching an audience estimated at 40,000. In this metropolitan area it is estimated that there are about 4,500 receiving sets in operation, of which 600 are in taverns, restaurants, and theatres, the remainder being in private homes.

The pioneer aspect of the Botany venture is indicated in the fact that only about half-a-dozen television programs now are being presented in the New York area. Television time has been on sale under F. C. C. authorization for about four months. As most television sets still are priced above reach of the average radio listener, the audience is made up chiefly of "class" buyers, representing substantial consumer purchasing power.

The program is scheduled to continue for 13 weeks. Spokesmen for the Botany company indicated, however, that if the innovation proved satisfactory from a sales viewpoint, it would be continued and expanded to include the whole line of Botany Worsted Mills merchandise.

The cartoons were designed by Douglas Leigh, well known for his animated features in electric light advertising. With a Botany lamb as the motif, the series is keyed to a weather forecast theme, and humorous sketches illustrate how Botany ties stand up under all kinds of strain. In one effective "Rain" cartoon, a Botany tie blows off a clothesline during a storm. The tie is grabbed by two dogs who submit it to some severe roughing. Then the Botany lamb arrives, examines the tie, and exclaims, "Not a wrinkle—it's a Botany!"

NBC Photos

The Botany lamb who foretells the weather and acts as salesman for the Botany's line of wool neckwear

Vagrant pups give a severe test to the wrinkle-proof qualities of the Botany tie in one of the new cartoon weather forecasts being shown on the National Broadcasting Co.'s television service for New York viewers

THE NECKTIE accompanies the Botany lamb on various other adventures in the jungle, at sea, in the forest, all of which are given a sales slant. The repertoire of this program comprises fourteen reels of 16-millimeter film; each forecasting a different kind of weather, and having a running-time of one minute. Obviously the reel which forecasts the weather of the next day is the one which is used on any one night.

The film cartoons for Botany were two months in preparation and more than 3,000 drawings were made before a satisfactory standard was attained.

Earlier textile promotions via television have been reported in TEXTILE WORLD, notably the promotion of fashions in 1932 on living models with cooperation of Durene Association, Cotton-Textile Institute, American Felt Co. and Duplan Silk Co. On other occasions since then fashion shows have been televised as textiles seem to adapt themselves to promotion through this medium.

Tensylon Is a New Textile

Yarn-like rubber hydrochloride product has several unique characteristics

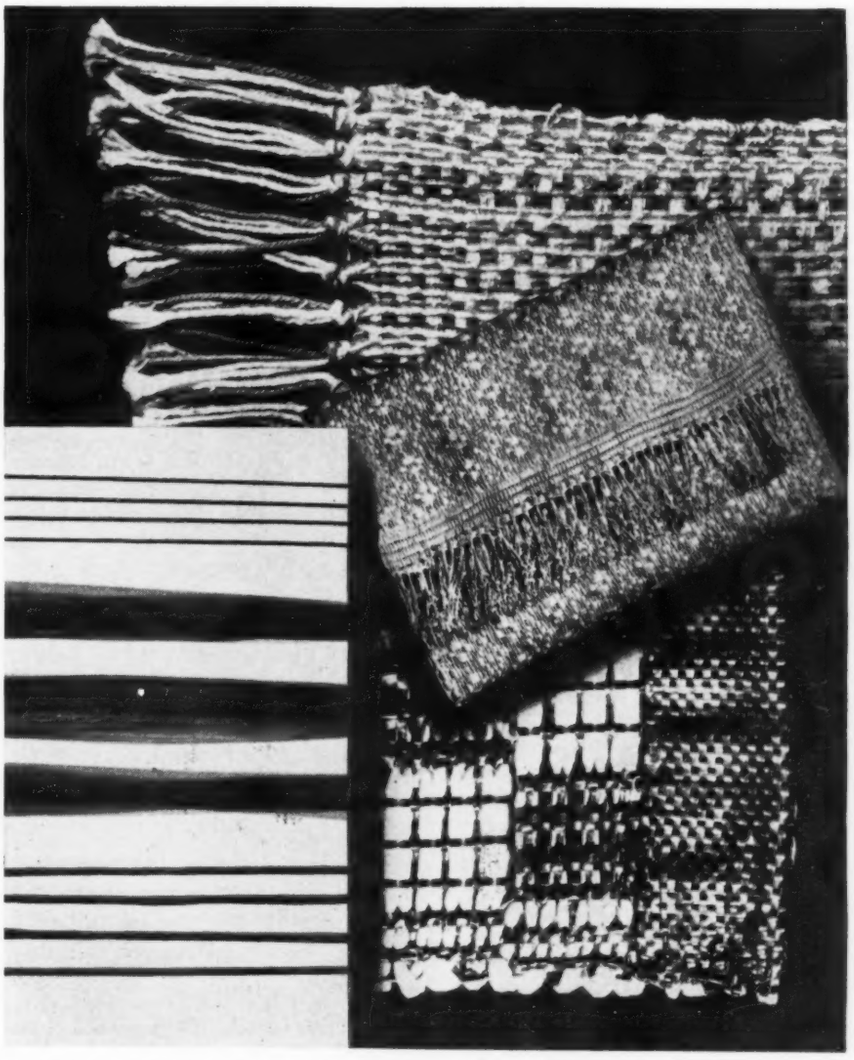
A MOUNTING FLOOD of new materials has in recent years invaded the textile raw-material field. Another is added to the list as the result of announcement by Tensylon Corp., Eldred, N. Y., which operates under license from Tensolite Corp., N. Tarrytown, N. Y., that it is now in position to deliver commercial quantities of its "tensilized" rubber hydrochloride yarn-like product. The raw material for Tensylon, as the new material is known, is Pliofilm, product of Goodyear Tire & Rubber Co. In the preparation of the material for textile uses, Pliofilm is cut into strips; "tensilized"—essentially a stretching process; rolled on itself or wrapped around other material, according to the effect desired; and bonded. Flat forms, known as Crille, are produced by Tensolite Corp.

Properties of the material are that it is very strong; has from 8 to 30% elasticity, depending on requirements; and high flexing strength, as compared to many other plastic materials. It is impervious to water, weak acids, alkalis, oil, perspiration, mold, moths, and grease. Fabrics produced from the material can be cleaned by merely wiping with a damp cloth.

Tensylon and Crille are available in translucent or opaque forms, and colored or clear, as desired. Application of color is an integral part of the process of making the original Pliofilm. A wide range of fast colors is made. For instance, of the samples illustrated, the handbag is a dull gold, the checked mat combines clear and black materials, and the throw rug combines clear Crille filling with vari-colored warp. The color card shown includes black, red, and green samples.

Textile uses to which Crille and Tensylon have been put include manufacture of ornamental, durable braids of all kinds; woven drapery and upholstery fabrics, especially those intended for use outdoors or which may be otherwise subjected to the elements or to hard wear, as in theater lobbies, buses, etc.; fabrics for shoe tops, handbags, luncheon sets, table covers, mats, ribbons, fishing leaders, belts, suspenders, sewing thread, etc.

Tensylon can be used either alone or in combination. The handbag has Tensylon warp and Crille filling. The rug has a cotton warp with Crille filling. Tensylon is also being used as a covering for cotton and rayon yarns, tinsel, etc. The bottom color-card sample is Tensylon-covered cotton yarn.



Examples of "tensilized" rubber hydrochloride materials for textile use: top to bottom—throw rug; handbag; double-plain fabric; left, card showing 0.015 in. Tensylon, Crille, and Tensylon-covered cotton. (Fabrics 1/3 original size; yarns full size)

Currently, the finest size available is 0.01 in. in diameter; yarn of this gage contains 5,500 yd. per lb. Yarns of 0.015 in. diameter, yielding 3,800 yd. per lb.; and 0.02, which contains 2,400 yd. per lb., are said to be the most popular sizes. The 0.015 yarn is illustrated at the top of the color card. The material is also available in gages up to 0.06 in.

Flat forms are made in several widths. The narrower widths are used "as is"; in widths of, say, ½ to 1½ in. the material is folded back and forth on itself, and used as filling. The middle card sample is an example of this. Sales agents for both Tensylon and Crille are Edwin L. Dale, Haverford, Pa., and H. A. Florsheim Co., 350 Madison Ave., New York.

Two Sets of Doups

For 3-end leno give balanced harness lift when weaving figured patterns

By A. E. McKENNA
Associate Professor of Weaving and Designing, Clemson College

IT IS POSSIBLE to weave figured leno fabrics of low sley on one set of super doups, but better loom operation is obtained by using two sets of doups working in staggered formation. The use of one set of doups causes irregular running of the loom because of the heavy lift on one pick and the light lift on the next pick. Staggered operation of two sets of doups produces a balanced lift of the harnesses, and thus provides for even running of the loom. This arrangement is especially useful for the higher sleys which require two sets of doups to spread the heddles and prevent crowding.

A figured three-end leno pattern woven on one set of super doups is shown in Fig. 1. *A*, *B*, and *C* illustrate the cloth, drawing-in draft, and chain draft, respectively. The chain draft shows that many harnesses are raised on the even picks and that few are raised on the odd picks.

A figured three-end leno pattern woven on two sets of super doups is illustrated in Fig. 2. As before, parts *A*, *B*, and *C* show cloth, drawing-in draft, and chain draft. The chain draft shows that approximately the same number of harnesses are raised on each pick. However, in this type of leno weaving it must be remembered that two spots on separate sets of doups cannot weave plain on the same picks, but must do so one pick apart, because the two sets of doups form cross sheds on different picks. This is illustrated in Fig. 3, which shows one group of ends on one set of doups starting a plain weave spot on the fifth pick and the other group of ends on the next set of doups starting a spot on the fourth pick.

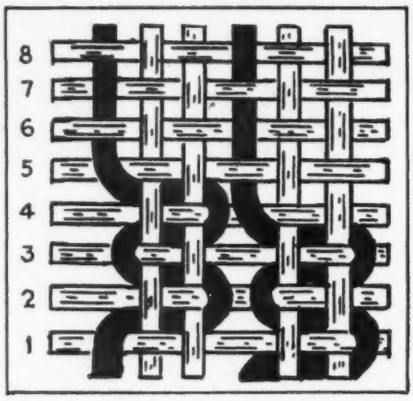


Fig. 3. Staggered spot formation obtained when using two sets of doups

No jumper motion is required in weaving these fabrics, as the ground harnesses operate in plain-weave order and, in changing position, pass in the center of the shed. The pattern shown in Fig. 2, *A*, required two slackners because the first set of doups forms a cross shed on the first pick and the second set of doups forms a cross shed on the second pick.

(*This staggered system of doup operation was originated by E. L. McCormack, designer, Spindale Mills, Spindale, N. C.*—Author)

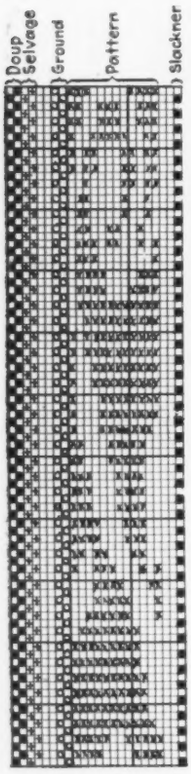


Fig. 1C

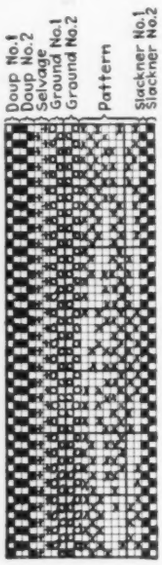


Fig. 2C

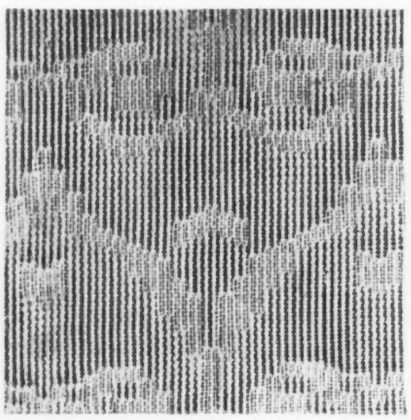


Fig. 1. One set of super doups is used to produce the figured three-end leno pattern above: *A*, cloth; *B*, drawing-in draft; *C*, chain draft

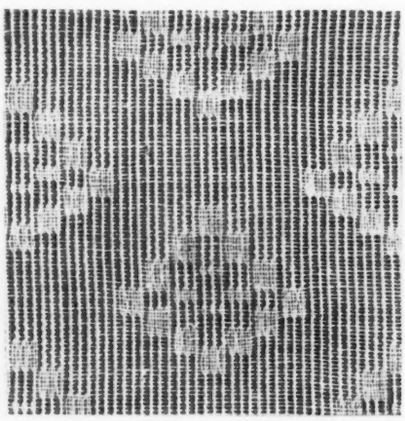


Fig. 2. Two sets of super doups are used to produce the figured three-end pattern woven above: *A*, cloth; *B*, drawing-in draft; *C*, chain draft

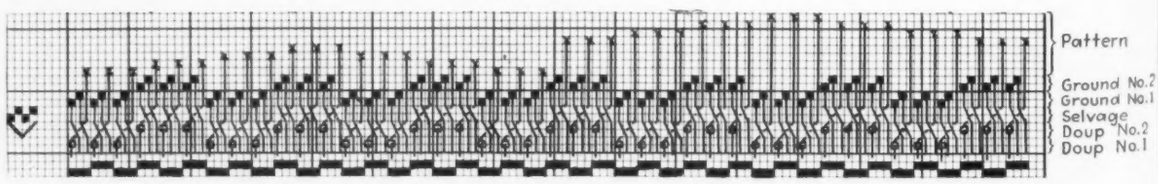


Fig. 2B

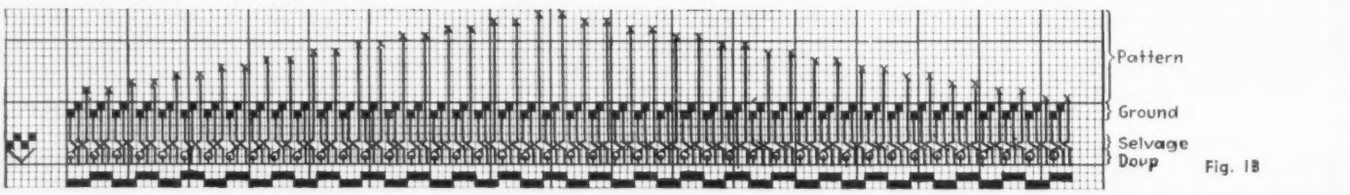


Fig. 1B

Styling Men's Wear Suitings

Woolen goods in for spurt in fall 1942 season; rayon-wool blends widely used

By BENJAMIN M. PRAGER

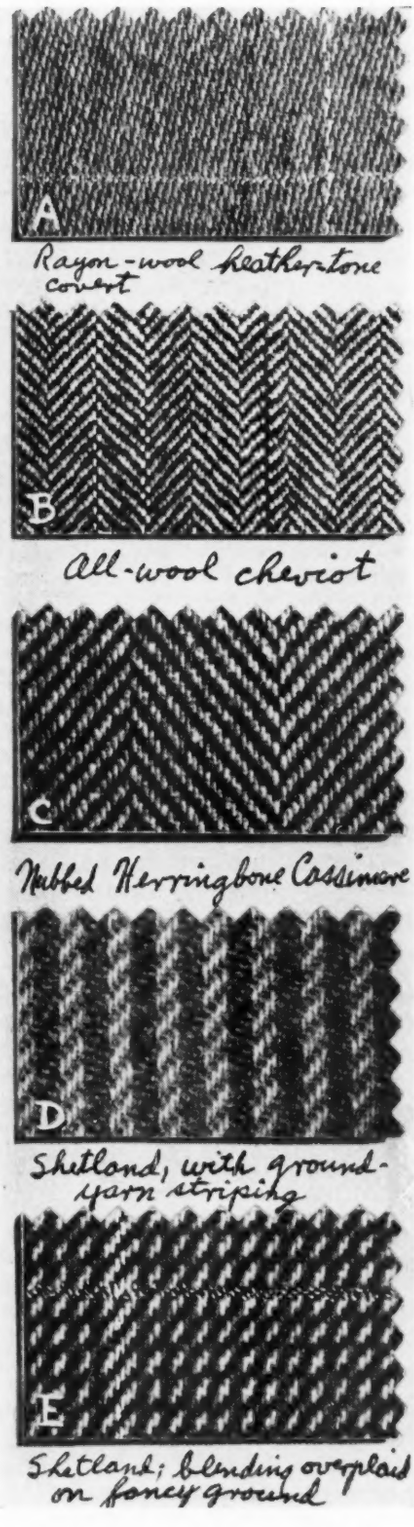
ACTIVITY IN MEN'S WEAR woolen suitings for the fall 1942 season should surpass that of all previous seasons. The reasons are numerous, but to this writer the following seem of most importance: (1) the great demand for sportswear fabrics; (2) the rising cost of worsteds. (3) the acceptability by the trade of manipulated fabrics. The most important fabrics for this fall will be, in order, coverts, cheviots, cassimeres, and shetlands. These are delt with individually below. A previous article (TEXTILE WORLD, October, 1941) discussed men's wear worsted suitings.

In the covert field it is expected plains will still be in most demand, but greater variation of ground color can be looked for. Shades of deep chocolate to medium light brown, and blues, will be more popular than in past seasons. The standard covert color, but on the dark side, will no doubt still be in demand. With reference to fancy coverts, there has been a leaning towards fabrics with soft overplaids, as illustrated in sample *A*. Cloths of this type will be popular for both suitings and trouserings. Coverts with contrasting warp and filling will this year come into prominence. Their appeal in suits for young men will be good, as either coat or trousers can be worn in combination.

Demand for cheviots by the young men's trade will be greater than usual. This fabric can be either a piece-dye or a mixture. In the mixture group, soft contrast herringbones and wide-wale effects, similar to worsted stylings, should prevail. Fancy stripings similar to sample *B* will also be in vogue. This sample is ½ in. herringbone, with blue stripes 1¾ in. apart, edged with slate. The center band of left-hand twill is edged with white decoration yarn, so that the pattern will not appear too broad.

Also included in lines should be Glen plaid effects of soft coloring. Plaids should not be too bold or too large, as this is principally a suiting fabric. Brightness of pattern is of utmost importance.

In the piece-dyed cheviots, in which rich solid shades can be attained, this cloth will find its real popularity. Simple styles, such as medium to narrow herringbones, plains, and small weave effects—such as variations of the diamond and pineapple weaves—will be leaders. Ground shades should be kept bright; red browns and brighter blues for the student fabrics, darker browns and medium to navy blues for the young men's trade.



Cassimeres, more than any other fabric, have been readily accepted into the rayon-blend field. Nubbed herringbone styles as shown in sample *C* will continue to lead in popularity. For the trousering trade, solid color, wide-wale effects will be good. They should be soft contrasting, and will also look well in heather-tone combinations. The Glen plaid effect will be in demand for both suits and trousers. Overplaids on solid ground weaves should not be more than 1¾ x 2 in., as much of this cloth is made up into small sizes. Fancy stripes will be wanted by that part of the trade which specializes in fancy pants and suitings.

Colors are of great importance, and should be kept clean and bright. Medium brown and dark blues, followed by medium gray, will be the leaders. It may be noted that only in this type of fabric will teal continue to be a popular shade.

Shetlands will gain still further in popularity in the fall 1942 season. This fabric, which is the most wanted as a double-duty suit, is in for a real shake-up as to style. Styles using ground yarn for stripes, as in sample *D*, are strictly sport-coat items. So also is sample *E*, which has a fancy ground effect obtained by use of colored yarns. This sample is also overplaided, and will be a hit among the younger set. Heather tones will still be in demand. Bright, but not sharp, Glen plaid effects will be wanted for sport coats to be worn with covert slacks.

As for regular suiting styles, both piece-dye and mixture shetlands can be similar: ¾ in. herringbones and variations of the wide-wale will be best. Heather tones on the bright side will be the best colors in the mixture fabrics, while lighter browns and blues will be leaders in the piece-dye group.

Proper Housekeeping

Labor training and safety also discussed at STA Eastern Carolina Div. meeting

GOOD HOUSEKEEPING, training of new help, and safety were the principal topics of discussion at the fall meeting of the Eastern Carolina Division of STA, held in Durham, N. C., Oct. 18. The chairman of the division, George Gilliam, superintendent of Sterling Cotton Mills, Franklinton, N. C., presided. Preceding the discussion, G. H. Dunlap outlined briefly the plans for some of the tests which he is conducting as part of the research program sponsored by the Textile Foundation, and offered his cooperation to any mills which wish to take part in the program.

The first subject for discussion was: "Discuss methods and arrangements made for good housekeeping as applied to machinery, walls, and floors, in all departments. How does this affect your safety program?" A housecleaning program for a picker room, as described by one member, consists of a cleaning period of about 45 min. at the beginning of each shift, during which time the machines are stopped and are cleaned by the operatives; the overseer or second hand inspects afterward. The stop-off periods necessitate a surplus of laps to supply cards, and the laps are kept on lap trucks, which are out of the operatives' way. Overhead cleaning is done during the week-end shut-down, and requires about 2 hr.; all motors and other electrical equipment are cleaned and maintained by an electrician.

In discussing cleaning of cards, the general plan outlined consists of sweeping twice on each shift by the operatives, with special attention to the floor under the card doffers; trash which drops under doffers frequently gets mixed with white strippings. Stress was laid upon the fact that oil holes in machines should be kept open at all times in order to allow proper lubrication.

It was stated by one member that it has been his experience that the safety program has greater effect on the cleaning system than vice versa, and he cited instances where cleaning systems have been changed to meet requirements of revised safety programs.

Cleaning of drawing frames, described by a mill man present, consists of brushing the frame and picking the clearers every creel, a thorough cleaning every 8 hr., and a weekly cleaning with compressed air; top and bottom rolls, saddles, and bearings are cleaned and re-oiled weekly.

The generally accepted method of cleaning roving frames is that of cleaning the back, the head end, and the foot end of each machine once on each shift, while the machine is running, and of cleaning the rest of the machine at each doff; overhead cleaning is done once a week, by compressed air, and the room is either stopped entirely or a section at a time is stopped while the cleaning is done above; sweeping around roving frames is done once every hour.

CLEANING SCHEDULE: One mill man, whose mill runs two shifts, presented the following cleaning schedule for spinning rooms: daily—rolls, bars, roving rods, guides, clearers, side rails; three times weekly—end guides, separators, spindles, ring rails; twice weekly—cradles, weight levers; once a week—front stands, sheath pulleys; twice monthly—back steel rolls, back end clearers, back stands. In addition, he stated, walls and ceilings are cleaned weekly, and floors are machine scrubbed once every three weeks; the spinning room is swept approximately every 45 min.

One of the big safety problems was described as being that of wet floors after scrubbing. Precautions are to remove as much of the moisture as possible and to warn all operatives of the danger of slipping. A second member described a wood preservative which, when applied to floors, obviates scrubbing and presents a surface from which oil and other dirt is easily removed.

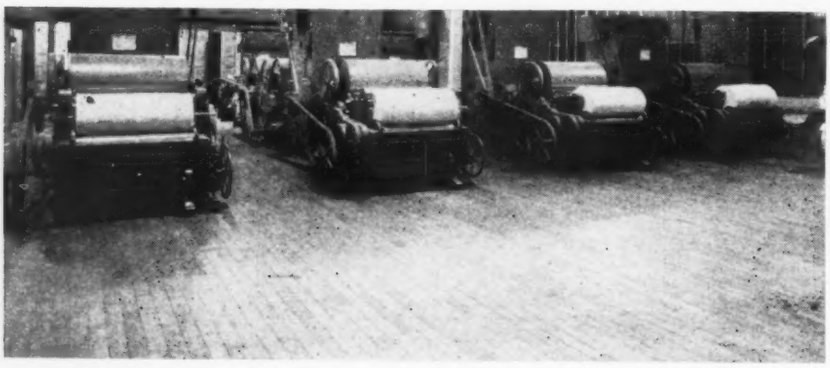
On winding, spooling, and warping, it was agreed that it is necessary to prevent accumulation of lint which might be blown into the yarn by a gust of air. Periodic cleaning of guides with soap and water, or a solvent, was recommended.

In the slasher room, use of compressed air for cleaning is not satisfactory, stated a member. Escaping steam makes lint adhere closely, and it can most easily be removed by mops or brooms. Size which is spilled on the floor constitutes a safety problem, and should be either immediately removed or sprinkled with sawdust.

Cleaning of looms should be done principally when the warp is out, and it should be thorough, according to one speaker. Daily cleaning can be done by each shift, and can be carried out with compressed air, except where very fine numbers are run; weave room humidifiers are cleaned weekly.

The second question was: "What system or method do you use for training new help?" The members who discussed this question agreed that they prefer to train workers, where possible, rather than to obtain them already trained; that one of the best methods of training workers is to give them unskilled jobs and to allow them to use spare time for learning; and that it is good policy to train young people, preferably those who are under 25 years old.

As regards proper methods of supervision for the second and third shifts, the consensus was that second shift supervision is little different from that of the first, but few members expressed themselves on the subject of the third shift. A comment of significance was that one mill is attempting to get its best workers to accept jobs on the third shift in order to increase the efficiency of that period.



Forty-five minutes devoted to cleaning at the beginning of each shift is recommended to keep picker room spic and span

Problems in Long-Draft Drawing

Discussed by Piedmont Division of STA; also the repair of textile machine parts

LONG-DRAFT PROBLEMS in the card room were among the principal points of discussion at the fall meeting of the Piedmont Division of Southern Textile Association, which met in Charlotte, N. C., Oct. 4. Marshall Dilling, superintendent of A. M. Smyre Mfg. Co., Gastonia, N. C., and executive secretary of the association, presided. Lewis Burgess, of Crompton & Knowles Loom Works, was a featured speaker and gave the members an "off the record" talk on the supply situation as he thinks it will affect the textile industry.

Following Mr. Burgess' talk, an open discussion of the situation by the members brought out a majority opinion that it now is expedient to repair and reclaim many machine parts which formerly were discarded when broken or worn. However, as an illustration of the undesirable extreme in this direction, one supplier quoted a mill man as follows: "I fixed looms for eleven years before I knew you could order supplies."

A discussion of various methods of handling repairs of broken parts brought out the following system, as described by a mill man present: pieces of a broken part are tied together with string by the fixer and taken to the supply room; the good part received in exchange is installed and the machine is started as soon as possible; daily accumulations of broken parts in the supply room are sent to the shop for repair; repaired and repainted parts are placed in supply-room bins for reissue.

Among the methods of repair which were described is that of building up the worn part with a liquid metal and subsequently grinding to size. One member stated that his mill is obtaining satisfactory results from the process.

The first question on the program was, "What is the difference in yarn made from single-process roving using long-draft drawing as compared with the two-process regular type of drawing, both kinds of drawing being equal in mechanical condition?" One member gave results of recent tests made on long-draft three-roll roving, with no aprons, as follows: making 22.50s yarn from 65 grain sliver and 1.40 HR., there were 44.7 ends down per 1,000 spindle hr., and skein break was 93 lb.; making

G. H. Dunlap, left, research director for Textile Foundation, and Frank L. Byrd, Springs Cotton Mills, discuss a technical point

27s yarn from 1.72-hank, 2-process roving, there were 49.02 ends down per 1,000 spindle hr., and skein break was 77 lb. Both yarns were made from 1 1/16-in. strict low and middling cotton.

A second member, who manufactures combed yarns and who has been using long-draft drawing only a short while, stated that the unevenness in his finished sliver was reduced 50% by the following system: breaker drawing, lap machine, comber, lap machine, and long-draft drawing.

All who had used long-draft drawing agreed that it is necessary to put pickers and cards in perfect mechanical condition if satisfactory results are to be obtained. One difficulty, as explained by a member, is the unevenness which occurs in picker laps, and which follows through subsequent processes, due to the lag in the evener motions on pickers; he further stated that his mill considers a lap with only 8% variation an extraordinarily good one, and that from his experience 4 in. is the best setting for the fulcrum arm of the evener.

There was divided opinion on whether installation of long-draft equipment is more beneficial in the card room or spinning room.

Supply costs on high-speed looms are considerably higher than on older low-speed machines, stated several men present. One mill man presented the figure of 2.93c. per hr. cost of operation X-Model looms at 192 picks per min., working 102 hr. per week, which he stated was the actual cost in his mill during the preceding year; his shuttle life was said to be 11.92 months. When running at higher speeds, looms must be in better mechanical condition and it is necessary for loomfixers to do better work, stated one member.

A brief discussion of the troubles encountered with irrigated cotton, especially when mills unknowingly mix it with the rain-grown variety, was ended by the decision that the new labeling program for Delta cotton should eliminate the troubles.

After the close of the discussion, G. H. Dunlap, research director for the Textile Foundation, STA, and the Arkwrights, explained the program which he is conducting. He stated that he then had 24 tests running. Of particular interest, due to a shortage of cards in some mills, was one in which cylinders were speeded up to 180 and 192 r.p.m. Results of all tests are to be announced as soon after completion as practicable.

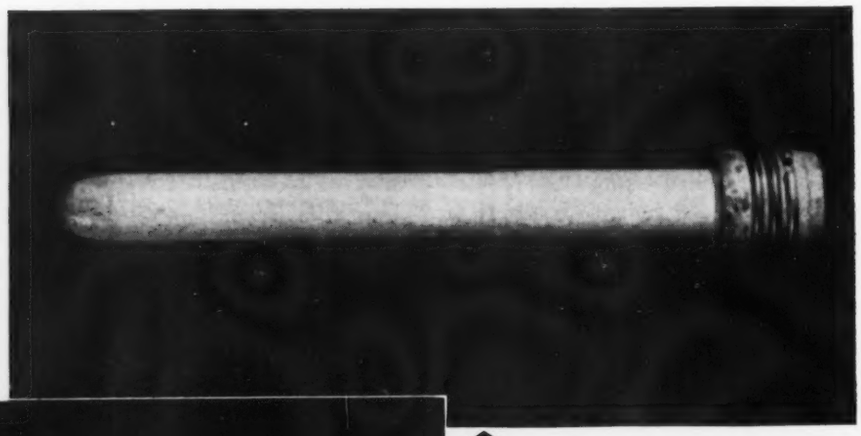
Marshall Dilling, of A. M. Smyre Mfg. Co., executive secretary of STA, presiding

Quills of Maximum Diameter

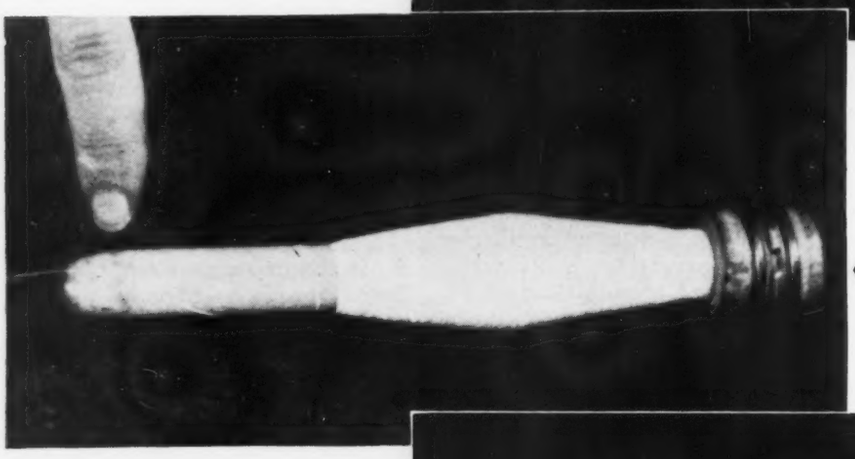
Are necessary to efficient weaving, but all factors must be considered

By ALFRED KING, JR.

MAKING QUILLS as large as possible is essential to the efficient operation of looms. But here, as in all else, there is a limit. "As large as possible" does not necessarily mean as large as the shuttle will allow, but rather as large as all the factors in the particular case make feasible. The accompanying pictures and captions illustrate an actual mill problem of this nature, and tell how it was overcome.

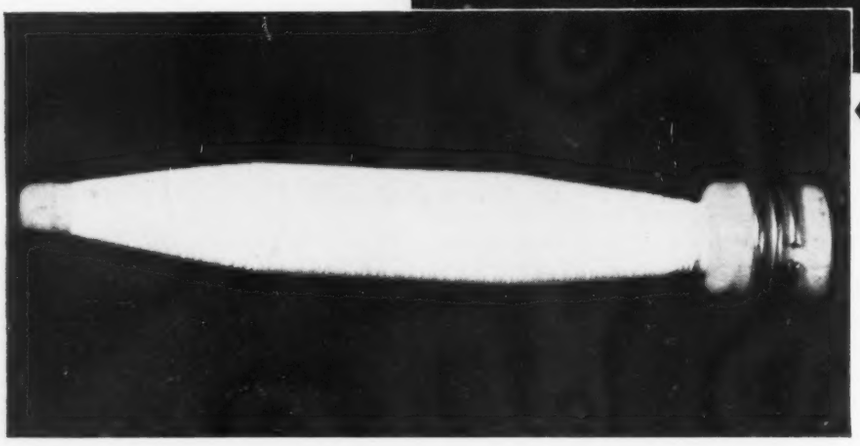


Upon installing automatic looms it was decided to make the quills as large as the shuttle would accommodate. This was approximately 1 1/8 in. in diameter. The quill itself was 11/16 in. in diameter at the butt



However, the end of this quill proved to be too large in circumference for the type of yarn we were running, causing the yarn to hang-up on the end, as shown above

It was decided to purchase quills smaller in circumference and more tapered. This corrected the hanging-up trouble, but we experienced difficulty in holding the yarn on the quill, due to soft noses and inability to hold a heel which contormed with the stroke. This caused broken picks and slugs in the cloth



Finally we discovered that the trouble was not, as first suspected, in the quills or in the machines, but in the amount of yarn we were trying to crowd on to the quills. We changed from No. 13 traverse wheels to No. 7 wheels, decreasing the diameter of the quills to 1 1/64 in. This immediately corrected the trouble and did not materially increase the amount of quilling needed, since it largely eliminated yarn waste resulting from too-large quills

FIXING HOSIERY MACHINES

FULL-FASHIONED MACHINES—Chapter XI. Narrowing Heads

By WALTER A. SIMOND

THE NARROWING RACKS require periodic checking and careful readjustment to compensate for wear. The narrowing nuts should be free from both side and end play on the spindles, and the spindles from end play in their bearings. In a readjustment, first, take the end play out of the spindle by loosening the cap screws, 7 in Fig. F26, and moving the inside bearing 6; next, readjust screws 8 to close the nuts to prevent side play; and loosen screw 9 and screw the bronze bushing in to eliminate the end play of each nut. Test for the clearance of the spindle and nuts by turning the spindle after locking each screw.

The carrier racks require a like readjustment. Good selvages cannot be made unless the carriers are accurately stopped and held, and only in this manner can sinker damage and needle breakage be prevented.

THE RATCHET MECHANISM should be set according to the following directions: (Sections quoted are from the February, 1936, issue of the *Reading Record.*)

"The ratchet mechanism on the narrowing head must be set to move the lock dial on the narrowing spindle a complete indexing for a two-needle narrowing; that is, the plunger, 1 (Fig. F26), of the dial should fit exactly in the V-groove, 2, of the lock dial after the dial is indexed for each narrowing. On old machines, check the strength of spring 3 on the lock dial plunger in the V-groove of the dial to eliminate the possibility of dial movement because of machine vibration.

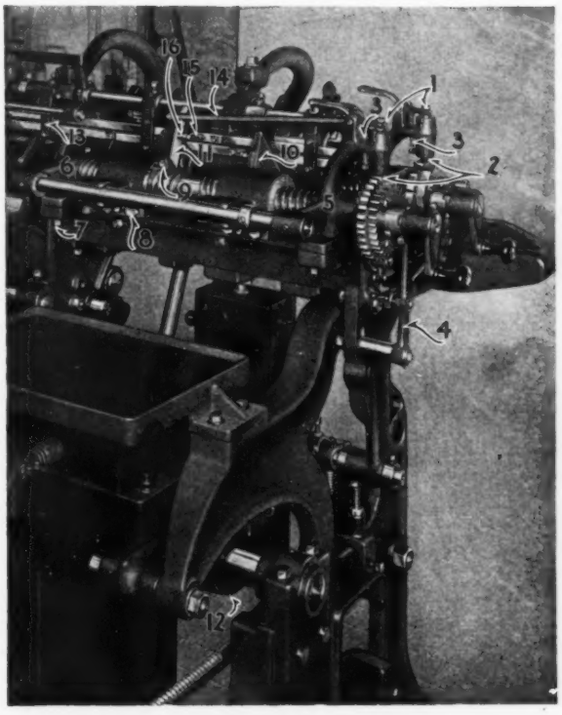


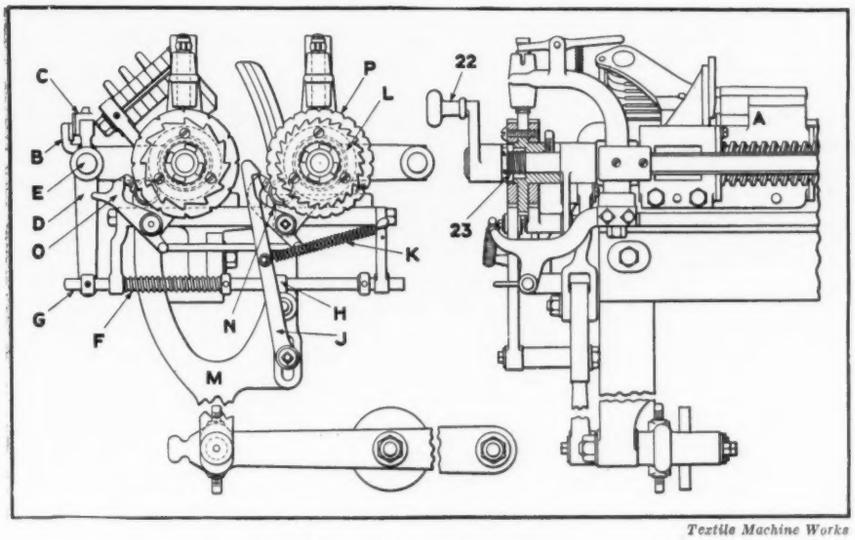
Fig. F26. Narrowing head on Reading Machine

"The pawl, 4, controlling the one-needle backward movement of the spindle must be set to turn the spindle the correct distance to allow the plunger to fall exactly in the V-notch of the dial on the spindle."

After the ratchet mechanism has been adjusted, it should be tested at high speed to be certain that all of the plungers seat at every narrowing with the carrier rods under full friction load. The narrowing machine may be raised for this test. Sometimes the feed pawls will move the lock dials a little too far when the machine is running. The plungers 1 (Fig. F26), for the carrier racks usually require stronger springs, 3, for plating. These lock dials have ratchet type teeth. They cannot be forced backward by carrier rod pressure. However, they can be pulled forward by an excessive friction load while plating when the carrier rods are held by the locks on the carrier narrowing nuts, thus casting off two or more stitches on the outside selvages, usually in the heels.

"Check the cast-iron stops, 10 and 11, which are assembled to the narrowing nut, to make sure they are exactly vertical; otherwise the points may move out of lateral position slightly and not mesh with the needles because the side movement of the points is controlled and guided from these stops when the points dip.

"When the narrowing points and needles have engaged the first time, they receive the loops and start moving upward. When the points are just above the knockover bits, the spindles of the narrowing heads are turned automatically through the cams, 12, con-



Textile Machine Works

Fig. F27. Setting for back pawl

trolling the ratchet mechanism of the narrowing spindles. Care should be taken to see that these narrowing points are moved laterally by the action of this cam as soon as the points clear the knockover bits. Any other timing of these cams will result in broken or bent narrowing points and needles, and bent sinkers, dividers, or knockover bits."

The clearance of each back pawl, *J*, (in Fig. F27), as it passes the tooth of ratchet *L* in the last leg narrowing, should be at least 1/32 in. This clearance is controlled by the position of the sliding steel block, *C*; and the backward movement of dial, *P*, should not begin until after the first heel narrowing. Since the legger narrowing combs have from 18 to 22 points each—depending on the gage of the machine—and the number of active points is decreased by one for each narrowing, thus carrying the narrowing marks toward the selvage of the heels, these marks should not be carried too far outwardly. This is due to the fact that if too few points are engaged at the selvage, there is danger of the pull of the fabric causing failure of the narrowing points to engage with the needles when the machine dips the second time to replace the stitches on the needles. Moreover, the finished stockings have a better appearance if the narrowing marks do not come too near the seams. The above setting for back pawl, *J*, is the same for the footers; but this pawl does not operate in the gusset or covered narrowings. The movements of the broad and narrow combs of the footer will be discussed in a subsequent chapter.

On machines having retaining fingers mounted on the carrier rack nuts for the alternating carriers in ringless knitting, the springs for these fingers should not be too heavy. The additional pull required to start these carrier rods should approximate 5 lb., and this can be weighed easily with a common spring scale by attaching it to the rods and weighing with the retaining fingers in and out of action. A greater pull may cause the carrier friction box to slip, loss of selvages, and other damage common to short carrier lead.

CIRCULAR MACHINES — Chapter XII (continued). Fashioning Effects

By JULIAN W. HUGHES

REDUCED HEEL AND GUSSET TOE. Ordinarily, the heel of circular-knit hosiery is made on half the needles, but on fine-gage machines producing hosiery to rival full-fashioned, it is customary to start the heel pocket on less than half the needles for improved appearance when the stocking is on the wearer. This is known as the "reduced heel," and the arrangement of the needles is shown in Fig. C26. It can be seen that the raising switch cam moves in only far enough to engage the longest butt needles—the 0.300-in., 0.338-in., and 0.390-in. needles—which it raises up out of knitting action. The 0.255-in. butt needles remain in knitting action, and since they form an arc less than half the circumference of the cylinder, the heel pocket will be proportionately smaller.

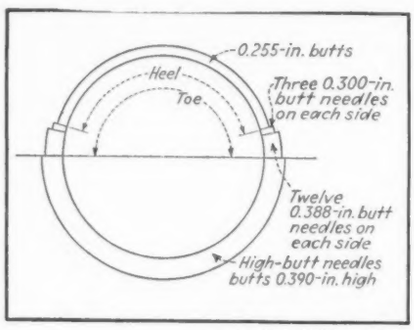
If it is desired to make the heel larger, it is only necessary to widen the arc by using more 0.255-in. butt needles and fewer 0.338-in. butt needles. To make the heel smaller, the procedure is reversed. In either case, only three 0.300-in. butt needles are used to separate the 0.255-in. from the 0.338-in. needles. These three needles on either side are for the purpose of bringing the heel-splicing and double-sole yarn three needles beyond the heel gore to add strength.

About 1931, a needle racking mechanism was developed by Scott & Williams to knit on their Model K machines a gusset somewhat like that in the toe of a full-fashioned stocking. Besides resembling a full-fashioned toe, the gusset type knits the toe with more taper, yet the width from toe to bottom is increased. The toe is closed by looping on the bottom instead of the top in order to conceal the looper seam when low-cut shoes are worn.

Briefly, this is what happens after the ring toe is made and the machine makes the next rack—the "into toe" rack:

The raising switch cam is inserted to raise the low-butt needles and at the same time the needle-lowering cam is inserted and draws all 0.338-in. and 0.390-in. butt needles down to a point under the raising switch cam. This puts the low-butts to the high inactive position, while the 0.338-in. and 0.390-in. butts are in position for up-picking.

On each reciprocation of the cylinder the up picks raise one needle at a time on each side until the narrowest point desired is reached. A yarn change takes place during this portion of the reciprocating, which gives the finished hose the appearance of having a much smaller toe pocket than actually is the case, and makes it possible to have the same kind of yarn in the first portion of the toe as in the instep.



Scott & Williams, Inc.

Fig. C26. Needle arrangement for reduced heel on Model K machines

The pickers raise all the high-butts except 23 0.338-in. butts which are in the center of the high-butts, and which make the center or point of the toe. The next rack lowers the 51 and 52 0.390-in. butt needles on either side. When the end of the regular up-picking has been reached, the up-picking continues on the needles just lowered. This produces the gusset and continues for two links of the chain.

The next rack of the machine raises all high-butts again to get them in proper position for down-picking, which now starts. Down-picking continues without interruption until the toe pocket is completed. The gusset which is inserted in the toe is a long narrow portion of straight stitches terminating in a wedge-shaped point toward the heel. When this cycle of knitting operations is completed, the machine knits the usual number of courses for the looper margin, presses off and is ready to start knitting another stocking.

Assuming that the fixer keeps the switch cams and pickers on these machines working freely, accurately set, and adjusted for normal wear, there should be no trouble knitting the reduced heel and the gusset toe. However, since the successful performance of this machine during the knitting of heel and toe depends on the needles with the correct length butts being in the right place, and since there is only 0.15 in. difference in the length of the longest and shortest butts, an apprentice fixer must know his needles and their layout on the cylinder if he is to get needles in the right places when inserting new ones.

TEXTILE WORLD'S ANNUAL MILL CHECK-UP NUMBER

Making the Check-Up Chart Work

CHECK-UP CHARTS were once regarded by textile manufacturers as a new-fangled invention to keep efficiency engineers busy. It was not until the start of the post-war textile depression, when manufacturers had to begin really to work for a living, that the lowly check-up chart assumed a position of some importance in mill management.

For a while, many sins were committed in the name of efficiency. There grew up a race of chart addicts who tried to prove graphically that two and two makes five. They delayed the development of scientific management at least as much as did reactionary executives.

But gradually the fight for existence relegated both the spell-binding type of efficiency man and the unbelieving type of manufacturer to the discard in which they belonged. Gradually, as it became increasingly necessary to produce economically if a textile mill were to survive, check-up charts came into their own as an important tool of good management.

Today, under the pressure of the defense program, they have become a "must." If textile mills are to continue to meet the demands of the Government for textiles for defense purposes and at the same time to meet normal civilian requirements, they must operate at the highest possible efficiency. Machines running at top speed for two and three shifts must be kept in prime condition. Waste must be eliminated. As the emergency grows more serious, efficiency of production must be still further increased – not merely to provide the needed goods, but to turn them out on a cost basis which will insure an adequate return to both capital and labor.

THAT IS WHY we on *Textile World* are devoting this Fifth Annual Mill Check-Up Number to a series of check-up charts for textile mills.

The pages in this special section carry reproductions of charts actually in use in all types of textile mills. From several hundred collected, we have selected approximately 80 of the more representative ones. They fall into these broad classifications: Production, Mill Efficiency, Quality, Productive Equipment, Engineering, Mill Buildings, Mill Villages, Maintenance, Employment, Safety, Supplies, Costs.

Practical use can be made of these charts. However, as each was developed for use in a specific mill, some modification is necessary to make it most suitable for application in other mills. Many of the charts that apply to particular processes can be adapted to other processes. Similarly, many of the charts originally devised for use in one branch of the industry can be adapted readily for use in another division.

A large percentage of the charts collected were 8½ x 11". A few were odd sizes. To facilitate filing, it is suggested that, wherever possible, mills adopt recognized standard sizes.

Forms can be printed, made on a duplicator, or hand-drawn. When large numbers of any one form are required, they are usually printed; when medium quantities are needed, they are generally made on a duplicator; when only a few forms are needed during the year, they are hand lettered, or typewritten.

WE CANNOT CLOSE this introduction without expressing our deepest appreciation to the mills which have cooperated by furnishing samples of charts and permitting us to reproduce them. It is that sort of helpfulness which makes the textile industry a pleasant place in which to work, and which is enabling this industry to put up a solid front for defense.

Douglas G. Woolf

WEEKLY PRODUCTION CHART

MILL WEEK ENDED

Average No. Spindles Run—DAY—FLY FRAME			Total Spinning Spindles in Mill—FLY FRAME		
Average No. Spindles Run—DAY—RING			Total Spinning Spindles in Mill—RING		
Average No. Spindles Run—NIGHT—FLY FRAME			Theoretical Production—Pounds—FLY FRAME		
Average No. Spindles Run—NIGHT—RING			Theoretical Production—Pounds—RING		
Average No. Yarn Spun for Week—FLY FRAME			Per Cent. Theoretical Production—FLY FRAME		
Average No. Yarn Spun for Week—RING			Per Cent. Theoretical Production—RING		
Average No. Yarn Spun for Week—(F. F. & Ring Com.)			Per Cent. Theoretical Production—FINISHED		

DEPARTMENT	HRS. DEP'T OPERATED		UNIT MACHINES OPERATED		PRODUCTION FOR WEEK	
	Day	Night	Day	Night	Own Yarn	Outside
OPENING AND PICKING						
CARDING						
COMBING						
SPINNING						
SPOOLING						
BEAM WARPING						
TWISTING AND TWINE ROOM						
WINDING						
REELING						
BALL WARPING						
FINISHING						
WEAVING						
CLOTH ROOM						
BALING AND SHIPPING						

EXPLA

Mail this Report on Saturday of each week to Accounting Department and send copy to Factory Manager's Office

WEEKLY CARDING REPORT

Week Ending 194

	No. Bales	Total lbs.
Cotton Opened		

	Lbs. per Lap	No. Laps	Total lbs.
Net Weight Laps			

Gallons Oil Used
No. Cards Ground
No. Frames Overhauled
Hours Pickers Run

	Grains per yd.	R.P.M. Doffer	Did.M. Doffer	Cards Run	Hrs. Run	Card Hrs. Run	Lbs. per Card per Hr.	Total lbs. Prod.
Cards								

	Grains per yd.	R.P.M., F.R.	Did. F.R.	Dels. Run	Del. Hrs. Run	Hanks Run	Total lbs. Prod.
1st. Drawing							
2nd. Drawing							

	Size	Gauge	Spindles per Frame	Spindles Operated	R.P.M. Spindles	R.P.M. F.R.	Did. F.R.	Draft Gear	Twist Gear	Twist per Inch	Std. H. R.	Actual H. R.	Hrs. Run	Hanks Run	Lbs. Prod.
Slubbers															
Slubbers															
Slubbers															
Intermediates															
Intermediates															
Intermediates															
Warp Speeders															
Warp Speeders															
Filling Speeders															
Filling Speeders															

Total Pounds Speeder Roving Run

WASTE RE-WORKED

Card Laps	Card Front	Drawing	Roving	Total

WASTE SENT TO WASTE HOUSE

Bagging	Ties	Vertical Opener	No. 12	Centrif	Dust House	Picker Motes	Card Fly	Card Strips	Sweeps	Clearer Waste	Total

REMARKS:

Overseer

Weekly production chart permits check on actual vs. theoretical production by departments and shifts. Original form 8½ X 11, printed

Weekly production report gives complete check up on operation of carding department. Original form 8½ X 11, printed

DAILY PRODUCTION REPORT

SPINNING ROOM

Mill No._____ DATE _____ 19____

YARN NO.	Kind of Stock	Frames Running		Total Spindles	Total Frame Hanks Prod.	Total Sp. Ran 8 Hrs.	Standard Wt. Per Sp. Hank	TOTAL POUNDS	Pounds Winder Prod.	
Warp Yarns		264 Spindles	252 Spindles							
Totals Wp. Yrn.										
Filling Yarns		208 or 240 Spindles	300 or 252 Spindles							

SLASHER PRODUCTION

WEEK ENDING _____

SETS ON SLASHER

BEGINNING OF WEEK

Sla. No.	Style	Full Wt.	Est. % on beams	Est. Wt. on beams
1.				
2.				
3.				
4.				

Total _____

END OF WEEK

Sla. No.	Style	Wgt.	Est. % on beams	Est. Wt. on beams
1.				
2.				
3.				
4.				

Total _____

SETS RUN DURING WEEK

SLA. #1		SLA. #2		SLA. #3		SLA. #4	
Style	Wgt.	Style	Wgt.	Style	Wgt.	Style	Wgt.
Total _____		Total _____		Total _____		Total _____	

GRAND TOTAL YARN SLASHED _____

WASTE

Sla. No.	Soft	Hard
1.		
2.		
3.		
4.		
Total		

	EST. % MOTS.	LBS. EA. WK.
Lbs. starch used		
Size Matl. used		
Total		
Size Lb. yarn		
Dry size Lb. yarn		

PRODUCTION

Customer:

PRODUCTION FOLLOW-UP

of	Style	Type	Recd.	Doz.	1941	April 14 15 16 17 18	April 21 22 23 24 25	April 28 29 30 1 2	May 5 6 7 8 9	May 12 13 14 15 16	May 19 20 21 22 23	May 26 27 28 29 30 2
~~1630-1~~	~~5163~~	~~P0~~	~~4/9/41~~	~~75~~			F K	P C	S			
~~1630-2~~	"	"	"	~~75~~			F K	P	C	S		
~~1632-1~~	2	~~3901~~		~~50~~			R F	K P C			S	
~~1632-2~~	"	"		~~50~~			R F	K P C			S	
~~1632-1~~	3	~~3902~~		~~50~~			R F	K P	C			S
~~1632-2~~	3	"		~~50~~			R F	K P	C			S
~~1632-3~~	"	"		~~50~~			R F	K P	C			S
~~1632-4~~	"	"		~~50~~			R F	K P	C			S
~~1632-1~~	4	~~3903~~		~~50~~			R F	K P	C			S
~~1632-2~~	"	"		~~50~~			R F	K P	C			S
~~1632-3~~	"	"		~~50~~			R F	K P	C			S
~~1632-4~~	"	"		~~50~~			R F	K P	C			S
~~1633-1~~	11	~~3910~~		~~50~~			R	F		K P	C	
~~1633-2~~	"	"		~~50~~			R	F		K P	C	
~~1633-3~~	"	"		~~50~~			R	F		K P	C	
~~1633-4~~	"	"		~~50~~			R	F		K P	C	

KNITTING ORDER CHART

MACHINES INSTALLED				WEEKLY CAPACITIES				DELIVERY DATES: WEEK ENDING
				RIBBERS		KNITTERS		October / November / December
GAGE	TYPE	DESCRIPTION	ATTACHMENTS	3/4 5/8 7/8 Doz.	Anklets Socks Doz.	3/4 5/8 7/8 Doz.	Anklets Socks Doz.	4 11 18 25 1 8 15 22 29 6 13 20 27
36	Ribbers	4 color	Elast. inlay. 1 feed	2,000	2,500	—	—	
	Ribbers	3 color	Elast. inlay. 1 feed	800	1,000	—	—	
	Ribbers	2 color	Elast. inlay. 1 feed	1,500	1,875	—	—	
	Ribbers	1 color	Elast. inlay. 1 feed	900	1,175	—	—	

Slasher production chart allows weekly check of sets on slashers, sets run, total yarn slashed, sizing materials used, and waste. Original form 8½ X 11, made on duplicator

Knitting order chart shows weekly capacity of machines in place and earliest delivery dates for new orders; bars indicate amount of business booked. Original form 11 X 15, printed

LOST YARDAGE CHECK-UP

Summary of Styles

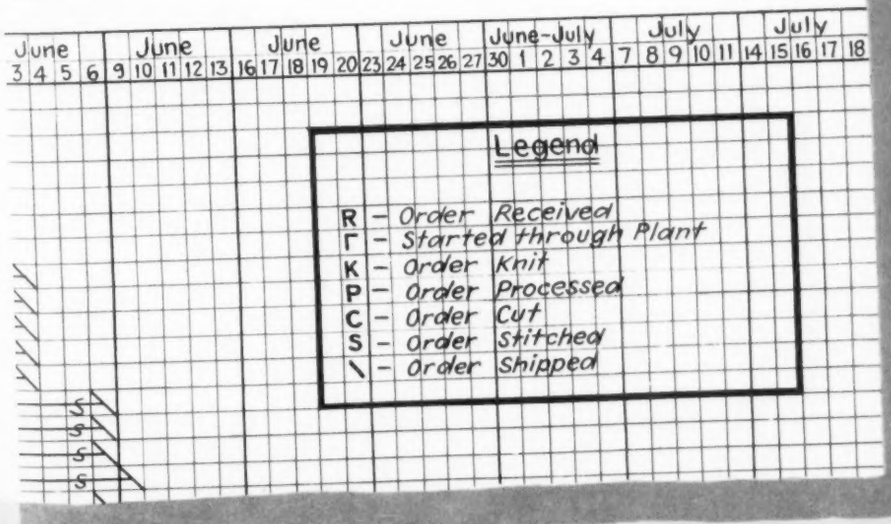
Quarter ending... 6/30/41

Style	Yd. Woven Goods on Hand 3/31	Yd. Woven 4/1 to 6/30	Total Woven Yd.	Yd. Sent to Finishing Dept. 4/1 to 6/30	Theoretical Woven Yd. on Hand 6/30	Actual Woven Yd. on Hand 6/30	Yd. Finished Goods on Hand 3/31	Yd. Finished 4/1 to 6/30	Total Finished Yd.	Yd. Shipped 4/1 to 6/30	Theoretical Finished Yd. on Hand 6/30	Actual Finished Yd. on Hand 6/30
250	300	9,355	9,655	8,647	1,008	1,008	—	8,723	8,723	8,095	628	623
350	—	1,125	1,125	1,125	—	—	—	1,104	1,104	1,100	4	—
450	725	10,983	11,708	10,800	908	908	2,008	10,925	12,933	11,743	1,190	1,033
550	401	15,462	15,863	10,800	5,063	5,063	865	11,250	12,115	11,549	566	565
650	—	8,933	8,933	8,800	133	133	—	8,809	8,809	8,809	—	—
750	—	2,250	2,250	2,250	—	—	—	2,223	2,223	2,110	113	113
850	1,005	6,945	7,950	7,500	450	450	325	7,579	7,904	7,653	251	204
Totals	2,431	55,053	57,484	49,922	7,562	7,562	3,198	50,613	53,811	51,059	2,752	2,538

RECAPITULATION

Yd. woven goods on hand 3/31/41	2,431		Yd. finished goods on hand 3/31/41	3,198	
Yd. woven 4/1/41 to 6/30/41	55,053	57,484	Yd. finished 4/1/41 to 6/30/41	50,613	53,811
Yd. sent to Finishing Dept. 4/1/41 to 6/30/41		49,922	Yd. shipped 4/1/41 to 6/30/41		51,059
Yd. woven goods on hand 6/30/41	7,562	57,484	Finished yd. on hand 6/30/41	2,538	53,597
Balance		00,000	Yd. production not accounted for		214

CHART


June 3 4 5 6
June 9 10 11 12 13
June 16 17 18 19 20
June 23 24 25 26 27
June-July 30 1 2 3 4
July 7 8 9 10 11
July 14 15 16 17 18
Legend
R – Order Received
Γ – Started through Plant
K – Order Knit
P – Order Processed
C – Order Cut
S – Order Stitched
\ – Order Shipped

Cloth-clearance chart permits quarterly check up of lost yardage; chart compiled from weekly production records, shipping invoices, and quarterly inventories. Original form 8½ X 11, printed

Production follow-up chart shows dates orders received; started through plant; knit, processed, cut, stitched, and shipped. Original form 16½ X 14, hand drawn

DAILY WARPER REPORT

MILL _____ LOCATION _____ DAILY REPORT ON _____ DATE _____ WARP NO. _____

NO. ENDS _____ YARN NO. _____ YARDS _____ Y. P. M. _____

Beam number	Piece up	Wild yarn	Weak thread	Bad knot	Lint on drop wires	Out cheese	Cheese ran out	Cobweb cheese	Tangled cheese	Doubtful	Total	Stops No. cause	Failed to stop	Start	Stop	Time	Remarks

WARPER TEST

Set No. ..... Time and Date Started .....

Yarn ..... Time and Date Finished .....

Speed of Machine ..... Yards in Set .....

Lot No. ..... Style ..... End .....

STOPS

										TOTAL
Beam Number										
Loop over Post										
Broken Filaments										
Slip Knots										
Tangled Cones										
Caught between Cone and Pan										
Kinks										
False Alarms										
Bad Tensions										
Bad Transfers										
Lost Ends										

REMARKS:

SLASHER SET REPORT

MILL ..... DATE .....

Set No. ..... Style ..... Slasher No. .....

Yarn .....

No. Ends ..... Warped Yards ..... Warped Lbs. .....

SIZE FORMULA: ..... Per 100 Gallons of Finished Size Solution.

Kind of Size .....

Kind of Softener .....

Temperature in Mixing ..... In Storage ..... In Size Box .....

Quetsch Pressure ..... Pounds.

RECORD OF SIZE MIXED AND USED

Batch No.	Gallons	SIZE		SOFTENER		TINT	
		Lbs.	Kind	Qts.	Kind	Oz.	Color & Kind
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
Total							
Wasted or Left Over							
Used							

CONSUMPTION: ..... % (Pounds of Size used per 100 lbs. Warped Yarn.)

SLASHING SPEED: ..... Yds. per min.

RECORD OF TIME REQUIRED TO RUN SET

Tender	Shift	Time In	Time Out	Hrs. Worked	Yds. Run
Laying In					
Running					
			Totals		

% EFFICIENCY: ..... % (Total Yards Slashed / Yards per min. x Total Time Worked)

BREAKS PER M YDS. .....

Signed ..... Overseer.

WARPS IN SET

Wp. No.	Back Clock	Slashed Yds.	% Stretch
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			

..... Yds. Slashed

..... % Clock Error

..... Act. yds. Slashed

..... Yds. Warped

..... Yds. Diff. (Gain)

..... Yds. Waste (H&S)

..... Yds. Act. Stretch

..... % Stretch

Slasher-set report provides means for checking operating efficiency. Original form 8½ X 11, printed

Daily warper report permits check up of productive efficiency, number and causes of stops, speed, and operating time. Original form 8½ X 11, made on duplicator

Chart for checking up causes and number of warper stops during test run. Original form 8½X11, printed

Loom-stoppage report shows number and causes of warp, filling, and mechanical stops per hour. Original form 8½ X 11, printed

End-breakage report allows check up of ends down in spinning per thousand spindle hours. Original form 8½ X 7, printed

End Breakage Report

Test No._____

Spinning Department

_____ 19____

MISCELLANEOUS	YARN NO.	SPINDLE HOURS	TOTAL ENDS DOWN	ENDS DOWN PER M S P H

Relative Humidity: Remarks:

Weather:

OVERSEER

Loom Stoppage Report

Mill
Type Looms
Warp
Filling
Reed
Date
No. Loom Hours Test
End
Picks
Style No.
Speed
Selvage

WARP	SHIFT 1 8 HOURS	Total	SHIFT 2 8 HOURS	Total	SHIFT 3 8 HOURS	Total	TOTALS
Broken Thread Body							
Broken Thread Selv.							
Loose Ends Body							
Loose Ends Selvage							
Bad Knots							
Cross Ends							
Cut by Shuttle							
Lint on Yarn							
Drawbacks							
Soft Yarn							
Dirty							
TOTAL							
FILLING							
Bad Quill							
Bad Knots							
No. Bunch							
Sloughing off							
Cut on Bunch							
Soft Quills							
Dirty							
TOTAL							
MECHANICAL							
Bang off							
Stop-Transfer							
Break Transfer							
Mis-Pick							
Filling Run Out							
Filling Cut							
Stop Off							
Shuttle Chipped							
Loom Repairs							
Unknown Stops							
Mis-Indication							
TOTAL							

Average warp stops per hour.....
Average filling stops per hour.....
Avg. mechanical " " " .....

REMARKS:

TOTAL AVG. LOOM STOPS PER HR.....

QUALITY

WEAVE-ROOM DEFECTS

Date_____ Mill No._____

Sec. No.	Loom No.	Style	Yards	Open Reed	Reedy	Threads Out	Leaking Hanger	Oil on Selvage	Gouts	Rowey	Roped Filling	Oily Filling	Skipping	Kinky Filling	Thin Places	Stringy Selvage	Shuttle Marks	Thick Places	Rolled Selvage	Wide Selvage	Rough Selvage	Defects on Selvage	Hard Size	Dropped Threads	Bad Temple	Oil on Warp

Cloth Defects

Style_____

Loom No._____

Cuts_____

Mispicks	
Slack Weave	
Bad Scratchups	
Threads out, long	
Threads out, short	
Drop Threads	
Reed Marks	
Breakouts	
Bad Selvage	
Soft Warp	
Oily Fillings	
Pickouts	
Thin Stripes	
Thick Stripes	
Kinky Fillings	
Sluff Filling	
Hard Size	
Slasher Oil	
Black Oil	
Yellow Oil	
Drawbacks	
Undershots	
Overshots	
Mixed Filling	
Jerked in Filling	
Misdraws	
Rowy	
Roll Selvage	
Bad Reed	
Cockled Yarn	

SECONDS

Style _____ Loom _____

Last Cut from this Loom was Seconds

Take Next Cut immediately

To Overseer _____ ( )

Special Grader ( )

Filling Defects	√	Warp Defects	√
Broken Px		Broken End	
Box Marks		Box Motion Out Ord.	
Cracks		Dirty End	
Creases		Dirty Knot	
Harn. Drop		End Out	
Heavy Marks		Floats	
Jkd. in Fill		Hard Size	
Kinky Filling		Loose End	
Light Marks		Misreed	
Low Harness		Split End	
Mach. Mispick.		Strip Back	
Peg Out-In		Tear Mark	
Shuttle Mark		Temple Mark	
Slubby Fill		Tight End	
Strip Back		Wrong Draw	
Temple Mark		Wrong Yarn Disp.	
Waviness		Warp Streaks	
Yarn Defects		Yarn Defects	

SECONDS

Chart for checking number and causes of weave-room defects. Original form 13 X 14, printed

Form for reporting cloth defects by individual looms. Original form 3 X 9½, printed

Ticket to call attention to loom which has been producing seconds. Original form 3 X 7 red cardboard, printed

Grader_____

Gouts on Selvage	Broken Filling	Slasher Oil	Misdraw	Double Draw	Flats	Coarse Thread	Cut Selvage	False Changes		Oily Thread	TOTAL

DAILY WASTE REPORT

		PREPARATORY DEPARTMENT										WEAVE ROOM						GRAND TOTAL
SHIFT	TYPE WASTE	Warping (Include Skinners)	Back-Winding	Slashing (Hard)	Slashing (Soft)	Quilling	Quill Cleaning	Rebeam'g	Sweepings	2	TOTAL	Warp (Sized)	Warps (Unsized)	Filling	Sweepings		TOTAL	
FIRST	Acetate																	
	Rayon																	
	Crepe																	
	Comb.																	
	TOTAL																	
SECOND	Acetate																	
	Rayon																	
	Crepe																	
	Comb.																	
	TOTAL																	
THIRD	Acetate																	
	Rayon																	
	Crepe																	
	Comb.																	
	TOTAL																	
TOTAL	Acetate																	
	Rayon																	
	Crepe																	
	Comb.																	
	TOTAL																	

Daily warping and weaving waste report shows amount and types of waste by shifts. Original form 8½ X 11, printed

WASTE REPORT

Date _____

	FIRST SHIFT	SECOND SHIFT	THIRD SHIFT	TOTAL POUNDS
Card lap waste				
Card front waste				
Card white roving				
Drawing sliver				
Spinning white roving				
Spinning scavenger waste				

Daily carding and spinning waste report by shifts. Original form 8½ X 11, made on duplicator

PRESS-OFF RECORD

Date..........

Operator—Day.......... Style..........

Night.......... Lot No.......... Mchn. No..........

CAUSE OF PRESS-OFFS	Monday		Tuesday		Wednesday		Thursday		Friday	
	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Bad Ring										
Bad Eyelet										
Bad Selvage										
Bad Carrier										
Bad Sinker										
Bad Friction										
Bad Felt										
Tight Snapper										
Gum on Snapper										
Gum on Carrier										
Gum in Tube										
Narr. Hole										
Picot Hole										
Lace Hole										
Knit Back										
Broken Sinker										
Hang Up										
Burst Out										
Waste on Cones										
Loose Ends										
Knot on Cone										
Slub on Cone										
Wet Nylon										
Rough Paper Cone										
Under Wound										
Heavy Yarn										
Light Yarn										
Sticking										
Slub in Carrier										
Kinks										
Unknown										
Ran Out										
Threaded Wrong										
Drop Stitch										
Broken Needle										
Pulled Thread										
Welt Turning										
Scissor Cut										
Lost Set—Mchn.										
Lost Set—Oper.										
Stitch										
Day Production										
Night Production										

LEGGER MENDER REPORT

DATE__________

Machine No.	Crooked Heels	Split Threads	Kinks	P. H. P. T.	Streaks	Picot off Center	Crooked Welts	3 cr. Pulls	Bad Loop Line	Long Strings	Cotton Threads	Scissor Pulls	Bad Welt Turns	Leg Sec.	Knit Back Welt	Legger Menders

FINISHED MENDERS

DATE__________

CARD NO.	CROSS MEND	PICKS	KINKS	INV.	RUNS	LARGE RUNS	SECONDS	SPEC.						BAD WORK
TOTAL														

Weekly report gives check up of causes of press-offs. Original form 8½ X 11, printed

Daily report shows causes of legger menders. Original form 8½ X 11, printed

Daily report indicates causes of finished menders. Original form 8½ X 11, printed

SHRINKAGE REPORT

REPORT TO _____ DATE _____

LOT NO. _____

CUSTOMER _____

GRAY DESCRIPTION _____

SANFORIZER WASH TEST

WARP _ _ _

FILLING _ _

RUN AT _ _

ZERO AT _ _

REPORTED BY _____

Fabric Construction and Strength

LOT NO. _____ DATE _____

FABRIC _____

ANALYSIS			BREAKING TESTS				
	GREY	FINISHED		GREY		FINISHED	
				WARP	FIL.	WARP	FIL.
Width							
Wt. Oz. Sq. Yd.			1				
Count			2				
			3				
			4				
			5				
			A				

WATERPROOF TEST

Lot No. _____ Date _____

Waterproof _____ Fabric _____

ANALYSIS

	SPRAY	HYDRO.	DENSO.	REMARKS
1				
3-L				
3-D				

Report for checking residual shrinkage of finished fabrics. Original form 8½ X 8½, made on duplicator

Laboratory report on construction and strength of gray and finished fabrics. Original form 5½ X 8½, printed

Laboratory report showing results of tests on waterproof fabrics. Original form 4½ X 5½, printed

SPINNING FRAME INSPECTION REPORT

First Shift - - - Take Odd Numbers
Second Shift --- Take Even Numbers

Week Ending _____

Mill No. _____ Shift No. _____ Section No. _____ Warp ☐ Fill ☐

	Monday	Tuesday	Wednesday	Thursday	Friday
Frame No.					
Top Rolls					
Saddles					
Aprons					
Apron Hangers					
Slip Rolls					
Roller Bar Tips					
Steel Rolls					
Weight Lever					
Lever Screws					
Roll Stands					
Roving Traverse					
Draft Gearing					
Head End Gearing					
Drive					
Skewers					
Bunch Builders					
Traverse Chain					
Pitman Rolls					
Doff Guards					
Top Roll Clearers					
Scavenger Rolls					
Lifter Rods					
Separators					
Check Stroke					
Adjust Revolv. Clear.					
Check Oil Caps					
Check Safety Devices					
Level Roving Rod					

Remarks

WINDER INSPECTION REPORT

MILL NO. _____ SHIFT _____ WEEK ENDING _____

Check	Mon.	Tues.	Wed.	Thur.	Fri.	Parts worn, loose or broken
Spindles						
Knock off wires						
Clean thread guard springs						
Cut off drum shaft laps						
Drum shaft couplings						
Tension brackets						
Line tension brackets						
Set slub catchers						
Line bobbin holders						
Oil and check ribbon breakers						
Drain ribbon breakers						
Check and blow out knotters						
Bobbin belt						
Escalators						
Blowers						
Cone racks						

Remarks:

SPOOLER INSPECTION REPORT

MILL NO. _____ SHIFT NO. _____ FOR WEEK ENDING _____

Inspect	Mon.	Tues.	Wed.	Thur.	Fri.	Loose Parts	Broken Parts	Worn Parts
Change & Clean Knotter								
Traveler								
Bobbin Pockets								
Thread Clamps								
Detectors								
Pull Wire Loops								
Snick Plates								
Spindle Arm Assembly								
Knock-Off Assembly								
Traveler Track Trolley Track								
Drum Bearings								
Skewers								
Cleaning System								
Warper								
Warper Creel								
Tailing Machine								

Remarks:

Three inspection reports for daily check up of spinning-frames, winders, and spoolers. Original forms 8½ X 11, made on duplicator

SPINNING ROOM SPEEDS

	C FRM.	FR RPM.	RPM. MOT.		C FRM.	FR RPM.	RPM. MOT.		C FRM.	FR RPM.	RPM. MOT.
1				36				37			
2				35				38			
3				34				39			
4				33				40			
5				32				41			
6				31				42			
7				30				43			
8				29				44			
9				28				45			
10				27				46			
11				26				47			
12				25				48			
13				24				49			
14				23				50			
				22				51			
# SPINNING ROOM				21				52			
DATE _____				20				53			
CHECKED BY _____				19				54			
				18				55			
				17				56			
				16				57			
				15				58			

Form for checking roll speeds of spinning frames; chart shows approximate layout of frames in room. Original size 8½ X 11, made on duplicator

Loom Check Card

Loom No. ..... Date .....

Style In ..... Style Out .....

LOOM FIXER

Shuttles	
Boxes—(Binders, etc.)	
Race Plate Covering	
Magazine (or battery)	
Picking Motion (Pickers, etc.)	
Brake	
Clutch Drive	
Harness Motion (shed, timing, etc.)	
Shuttle Changes (or bobbin changes)	
Box Motion Indicator	
Center Stop Motion	
Feeler Motion	
Temples (and rolls)	
Thread Cutter	
Protection	
Reed	
Lay Motion	
Dobby (head motion)	
Dobby Drive	
Spreader Roll	
Take-up Motion (Pickwheel, etc.)	
Crank and Cam Shafts	
Let-off Motion	
Loom Tightened	
Warp Stop Motion	
Whip Roll	
All Bearings Checked	
Loom Properly Oiled	

Remarks:

Time Started .....
Time Finished .....
Total Time Required .....

Signed .....

WARP HANGER

Harness Level and True	
Cords and Lift Wires Properly Set	
Pull Down Springs	
Sheaves Clean and Free of Binding	
Hooks Straight on Harness Frames	
Heddles Properly Spaced	
Lay Covering Satisfactory	
Is Reed Clean?	
Drop Wires Properly Set	
Lease Rods in Position	
Is Loom Thoroughly Clean?	
Press Roll Free of Waste	
Race Plate Covering	

Remarks:

Time Started .....
Time Finished .....
Total Time Required .....

Signed .....

INSPECTOR

Pick Wheel	
Reed Count	
Filling Yarn	
Disposition of Fill. (Shuttles on Correct Pick)	
Disposition of Warp (Twist, etc.)	
Pattern Chain	
Selvage Draw and Disposition	
Direction of Twill (if any)	
Off Loom Pick Count	
Off Loom Width	
Mixed Yarn in Warp or Filling	
Misdraws or Misreeds	
Warp Tension	
Tie Threads	

Remarks:

Front and back of loom ticket listing items to be checked by loom-fixer, warp hanger, and inspector. Original form 3½ X 9½, cardboard, printed

Inventory of Machinery and Equipment

Department .....

Location .....

NO. OF ITEMS	DESCRIPTION	IDENTIFYING MARKS	CONDITION	ESTIMATED REMAINING LIFE

Correct:

Superintendent .....

Overseer .....

Instructions:

1. List identical items by groups. If similar but not identical list separately.
2. Give as complete description as possible, including such information as type, size (number spindles, width of loom, etc.), maker, model, etc., showing under column headed "Identifying Marks" serial number or year.
3. Indicate condition by N—New, G—Good, R—Requires some repairs for first class operation, O—Obsolete.
4. Remaining Life should represent an estimate of the number of years which equipment can be used.

Machinery inventory report for checking on condition and estimated remaining life. Original form 8½ X 11, printed

KIER PRESSURE SLIP

DATE .....

KIER NO.	BOIL KIER NO.	STEAM ON	END 1 st. HOUR	END 2 nd HOUR	END 3 rd HOUR	END 4 th HOUR	END 5 th HOUR	END 6 th HOUR	END 7 th HOUR	END 8 th HOUR	END 9 th HOUR	END 10 th HOUR	END 11 th HOUR	END 12 th HOUR

Chart for hourly check up of kier pressure. Original form 8½ X 11, printed

Boiler Room Report

Time	Steam Pressure	Steam Flow	Air Flow	Flue Gas Temp.	Furnace Draft	Uptake Draft	Sec. Air Pressure	Primary Air	Pulv. Diff.	Coal & Air Temp.	Burners in Use	Tip Size	Oil Pressure	Oil Temp.
7.00 A. M.														
8.00 "														
9.00 "														
10.00 "														
11.00 "														
12.00 "														
1.00 P. M.														
2.00 "														
3.00 "														

Hours	Ampere Meter Readings				Boiler Feed Temp.	Up	
	No. 1	No. 2	No. 3	No. 4		No. 1	N
Total							

WATER-SOFTENING

Soft Water—Gals.

	No. 1	No. 2	No. 3	No. 4
Finish				
Start				
Diff.				

CALCULATIONS

Total Amount of Coal Used	
Total Amount of Steam	
Total Amount of Water	

STEAM DISTRIBUTION

For .... Period Ending ...., 19....... ...., 19.......

MANUFACTURING TOTALS

WEEK	LBS. WOOL Scoured	LBS. WOOL Dyed	LBS. YARN Spun	LBS. YARN Dyed	¾ AX. YDS. Woven	¾ VELVET YDS. Woven	¾ AX. YDS. Finished	¾ VELVET YDS. Finished	¾ WILTON YDS. Finished	
1										
2										
3										
4										
TOTAL										

UTILITIES TOTALS

WEEK	ELECTRICAL Kw. Hrs.	WATER		COAL Lbs.	ASHES		Lbs. Steam Generated	Steam Process	Steam Heating	Lbs. Steam Per Lb. Coal
		Creek	Purchased		Lbs.	%				
1										
2										
3										
4										
TOTAL										

STEAM DISTRIBUTION

WEEK	SPINNING MILL		Lower Blending Heat	Lower Card and Spinning Heat	STOCK DYE		SKEIN DYE		STARCH AND BEAM.	
	Process	Heat			Process	Heat	Process	Heat	Process	Heat
1										
2										
3										
4										
TOTAL										
WEEK	Cop Boiling		Velvet Set Heat	Axmin. Set Heat	Axmin. Thread Heat	Axmin. Weave Heat	Velvet Weave Heat	Cut Ord. & Sample Heat	FINISHING	
	Process	Heat							Process	Heat
1										
2										
3										
4										
TOTAL										
WEEK	Ship. and Storage Heat	Maintenance Heat	Stores Heat	Office Heat	Boiler House					
1										
2										
3										
4										
TOTAL										

Steam-distribution chart provides check of manufacturing totals against power and steam generated and consumed. Original form 8½ X 11, printed

Daily power-plant report gives check of meter readings, feed-water treatment, and efficiency of fuel consumption. Original form 11 X 14, printed

Date _____

Steam Pressure at Burner		Steam Flow Meter	Coal Meter	Oil Meter

Boiler-room report permits hourly check of all operating conditions. Original form 8 X 14, printed

Daily Power Plant Report

Date _____

take Temp.			Make Up Water Meter
. 2	No. 3	No. 4	7.00 A. M. to 5.45 P. M.
			5.45 P. M. to 7.00 A. M.
			6.00 P. M. to 4.30 A. M.
			K. W. Meter
			7.00 A. M. to 5.45 P. M.
			6.00 P. M. to 4.30 A. M.
			5.45 P. M. to 7.00 A. M.

Steam Flow Meter Readings—7.00 to 5.45 P. M.

	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 10	No. 11
Finish								
Start								
Diff.								

Readings from 5.45 p. m. to 7.00 a. m.

Finish								
Start								
Diff.								

Readings from 6.00 p. m. to 4.30 a. m.

Finish								
Start								
Diff.								

Stoker Ram Readings 7.00 a. m. to 5.45 p. m.

	No. 1 Boiler No. 1	No. 1 Boiler No. 2	No. 2 Boiler No. 1	No. 2 Boiler No. 2	No. 3 Boiler No. 1	No. 3 Boiler No. 2	No. 4 Boiler No. 1	No. 4 Boiler No. 2
Finish								
Start								
Diff.								

Readings from 5.45 p. m. to 7.00 a. m.

Finish								
Start								
Diff.								

Readings from 6.00 p. m. to 4.30 a. m.

Finish								
Start								
Diff.								

Steam on Mill

Day	Night
Hrs.	Hrs.
Boilers in Service	
Stoker Eng. in Service	
Blowers in Service	
Pumps in Service	
No. 1 No. 2 No. 3 No. 4 No. 5 No. 6	

TANKS			
Backwash			
No. 1	No. 2	No. 3	No. 4

V Notch Meter		
7.00 a. m. to 5.45 p. m.	6.00 p. m. to 4.30 p. m.	5.45 p. m. to 7.00 a. m.

Average CO.			
No. 1	No. 2	No. 3	No. 4

Outside Temperature	
8.00 A. M.	
12.00 NOON	
4.00 P. M.	

REMARKS

Evaporation per lb. Coal	
Lbs. Coal per K. W.	
Lbs. Steam per K. W.	

Signed _____ Chief Engineer.

VALVE INSPECTION

WEEK ENDING_____

INDICATOR POST				INSIDE VALVES				UNDERGROUND VALVES			
VALVE MARK	CONTROLS	INSPECTED AND FOUND		VALVE MARK	CONTROLS	INSPECTED AND FOUND		VALVE MARK	CONTROLS	INSPECTED AND FOUND	
		OPEN	CLOSED			OPEN	CLOSED			OPEN	CLOSED
A	East Section No. 1 Mill			1	Dust Cellar No. 1 Picker Rm.			1	8" On Main N. Side No. 1 S. H.		
B	Middle Section No. 1 Mill			2	El Shaft & Closet No. 1 Pic. Rm.			2	8" On Main Near No. L		
C	West Section No. 1 Mill			4	Dust Cellar No. 2 Picker Room			3	4" On By Pass		
D	East Section No. 2 Mill			7	Waste Room Cellar			4	8" On Main		
E	Middle Section No. 2 Mill			8	Humidifier Pump Room			5	4" To Inn and Old Brick Mill		
F	West Section No. 2 Mill			9	No. 1 Engine Basement			6	8" On No. 2 & 3 S. H. Main		
H	West Tower No. 2 Mill			10	Cloth Chute			7	6" On Main from Pumps		
I	Waste House			11	Truck Garage			9	8" On Main No. 1 Gate House		
J	No. 2 Pump Room			12	Cloth Room Dust Cellar			10	8" On Main N. Side No. 1 Mill		
K	Cloth Room			13	Fire Pump House			11	8" On Main N. Side No. 2 Mill		
AA	No. 2 Store House, Sec. 9			14	Oil House			13	⅝" On Main N.W. of No. 3 S.H.		
BB	" " " " " 10			15	Dust Cellar No. 3 Picker Room			14	8" On No 2 & 3 S. H. Main		
CC	" " " " " 11			20	W. End No. 3 Stairs			15	8" On Main Cor. Park & 1st St.		
DD	" " " " " 12			21	Laundry Basement			16	6" Drain West 1st St.		
EE	" " " " " 13			22	Passage Way Basement			17	Mill Fefreshment Stand		
W	" " " " " 14			23	Cloth R...			18	8" On Main at Reservoir		
X	" " " " " ...							19	8" On Main at Reservoir		
								20	12" Cut-Off No. 1 Reservoir		
								21	12" Cut-Off No. 2 Reservoir		
								22	8" On Main Cor. W. 1st & G. St.		
								23	2½" Garage & Shops		
								24	4" Village Carpenter Shop		

MOTOR INSPECTION

Mill_____ Date_____ Motor No._____

Location_____ H. P._____

Drives_____

Make_____ Volts_____ Amps._____ R. P. M._____

Type_____ Overload Setting_____ Fuse Size_____

	Condition Found	Repairs Made
Supports and Bolts		
Frame and Rotor		
Air Passages—Cleaned		
Air Gap—4 Sides		
Bearings Washed and Filled		
Internal Res. and Brushes		
Pulley or Coupling		
Belt or Chain		
Ground Connection		
Conduit and Fittings		
Switch, General Condition		
Switch Contacts		
No Voltage Release		
Overload Trip		
Fuses and Clips		
Fuse Box		
Wires—Fuses to Motor		
Insulation, Motor and Leads All three Phases Meg. Ohms		
Amps. to Motor Full Load		

HUMIDITY REPORT

Mill_____ Date_____ 19____

DEPARTMENT	Floor	Time	Bulbs Dry	Bulbs Wet	Rel H'd'ty	Controls On	Controls Off	Windows Open	Windows Closed	Doors Open	Doors Closed	Out of Order Heads	Out of Order Control	REMARKS

Inspection chart shows number of fire-protection valves open and closed, and condition of other fire-protection equipment. Original form 12 X 11, printed

Inspection chart indicates condition of motors and repairs made. Original form 8½ X 11, made on duplicator

Humidity report shows hourly wet and dry-bulb temperatures, and condition of controls, windows, and doors by departments. Original form 8½ X 11, made on duplicator

Chart for checking of ammeter load readings by departments. Original form 8½ X 13, printed

Check-up chart for adequacy of wiring system for lighting purposes. Original form 8½ X 11, made on duplicator

Meter-reading report for daily checking of electric and water supplies. Original form 8½ X 11, made on duplicator

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REMARKS

Hydrants Examined by
Nos. Leaking

Fire Doors Examined by
Which Ones Defective?

Fire Pails Examined by
Which Ones Empty

Fire Companies Drilled Yes No
No. of Men Responded
Fire Pump Tried
No. 1 Reservoir Con. Ft. Water
No. 2 Reservoir Con. Ft. Water

Have Hose Houses Been Inspected?
Is Equipment Each House Compete?
Which Ones not Complete?

Stand Pipe Hose Examined by
Which Ones Found Defective?

Is Fire Truck Equipment Complete?

Dry Pipe System at Store
Pressure Found on Valve
Pumped to

Have Electric Elevators Been Inspected?
Which Ones Not in Order?

Have Outside Sprinklers at School House
Been Inspected?

Are Fire Blankets In Place?
Which Ones Missing?

Are all Fire Extinguishers Full?
And in Place?

Remarks:

WIRING SYSTEM, LIGHTING

Date .....

1. WATTAGE PROVISIONS — INSERT FINDINGS HERE
   (a) Are feeders and circuits adequate for providing correct wattages throughout the plant? .....
   (b) Is spare future capacity provided for? .....
2. OUTLET LOCATIONS
   Have outlets been provided for:
   (a) General distribution reflectors? .....
   (b) Local units? .....
   (c) High bay units? .....
   (d) Watchman or cleaning lights? .....
   (e) Yard lights? .....
   (f) Pit lights? .....
   (g) Gages and indicators? .....
   (h) Exits and stairs? .....
   (i) Portables? .....
   (j) Pilots? .....
   Are these outlets correctly located? .....
3. MAINTENANCE
   Are lighting units:
   (a) Accessible or adjustable for cleaning? ..... for lamping? .....
   (b) Guarded? .....
   (c) Self-leveling? .....
   (d) Vibration insulated? .....
   (e) Theft protected? .....
4. CONTROL
   Are outlets controlled from:
   (a) Panelboard? .....
   (b) Wall switches? .....
   (c) Ceiling pull? .....
   (d) At sockets? .....

Are manual or remote-controlled master switches practical for: — INSERT FINDINGS HERE
   (e) Large groups, with several control stations? .....
   (f) 3-way switching? .....
   (g) 4-way? .....
   (h) Lock switches? .....
   (i) Indicating lamp annunciators? .....
   Are lights being wasted through lack of:
   (j) Convenient controls? .....
   (k) Pilots? .....
   (l) Are fire exits on separate emergency throwover controls? .....
5. WIRING DEVICES
   (a) Are switches capable of controlling lamps of high wattage inrush? .....
   (b) How are plates insulated? .....
   (c) Have heavy duty industrial type receptacles and plugs been installed? .....
   (d) Do they provide grounding protection? .....
   (e) Are sockets and switches loose, flickery, or faulty? .....
   (f) Are devices rugged enough to withstand abuse? .....
6. VOLTAGE
   (a) Are automatic regulating devices provided to protect against wide voltage variations? .....

DAILY LOAD READINGS ON AMMETERS

FROM 6 A. M. 19
TO 6 A. M. 19

TIME	MILL No. 1							DYEING and CLOTH ROOM	MILL LIGHTS	Village Power & Lights	SHOP	Humid. and Air COMPR.	MILL No. 3							MILL No. 2				
	CARDING		WEAVING		SPINNING								CARDING		WEAVING		MILL LIGHTS	SPINNING			SPINNING		WEAVING	CARDING	
	WEST	EAST	SOUTH	NORTH	EAST	CENTER	WEST						EAST	WEST	EAST	WEST		N.EAST	CENTER	S.EAST	NORTH	SOUTH		NORTH	SOUTH
6 A. M.																									
7																									
8																									
9																									
10																									
11																									
12																									
1 P. M.																									
2																									
11																									
12																									
1 A. M.																									
2																									
3																									
4																									
5																									

METER READINGS

Date 19

Utility Co. Meter _____ KWS
Our Meter _____ KWS
Village Meter _____ KWS
Power Factor _____ %
Demand Meter _____ KWS
Ammeter, Mill _____ AMPS
Voltmeter, Mill _____ AMPS
Opening Room Ammeter _____ AMPS
First Floor Ammeter _____ AMPS
3rd Floor Ammeter _____ AMPS
2nd Floor East End Ammeter _____ AMPS
2nd Floor West End Ammeter _____ AMPS
Water Meter _____ GALS

REMARKS:

FIRE PROTECTIVE EQUIPMENT

Name of Mill _____ Report No. _____

Location _____

File for Examination of Insurance Inspector

Condition Indicated by Check Thus: ✓

Valve Controlling Water Supply to Sprinkler

VALVE	LOCATION	CONDITION		
		OPEN	SHUT	STRAPPED
No. 1		OPEN	SHUT	STRAPPED
No. 2		OPEN	SHUT	STRAPPED
No. 3		OPEN	SHUT	STRAPPED
No. 4		OPEN	SHUT	STRAPPED
No. 5		OPEN	SHUT	STRAPPED
No. 6		OPEN	SHUT	STRAPPED

Indicator Posts Valves Controlling Water Supply

VALVE	LOCATION	CONDITION		
		OPEN	SHUT	STRAPPED
No. 1		OPEN	SHUT	STRAPPED
No. 2		OPEN	SHUT	STRAPPED
No. 3		OPEN	SHUT	STRAPPED
No. 4		OPEN	SHUT	STRAPPED
No. 5		OPEN	SHUT	STRAPPED
No. 6		OPEN	SHUT	STRAPPED

Is By-Pass for Filling Tank shut? Did you shut it?

Which inside Gate Valves not Placarded? Did you put up cards?

Which inside Gate Valves found without straps? Did you supply straps for these?

Sprinkler Tank

Did you personally examine it? Found full? If not, did you have it filled?

Steam Fire Pump

NOTE.—Fire pumps should be tested at least once a week, developing water pressure.

NAME OF PUMP	STEAM TRAP O. K.?	STEAM DRIPS OPEN?	TESTED TODAY?	POUNDS WATER PRESSURE MAINTAINED?	PUMPS IN GOOD CONDITION?

Note Defects Is Pump suction clean?

Is Reservoir for pump supply full? If not, did you have it filled? Is priming tank full? Did you fill it?

Fire Doors and Shutters

Tinwork in need of repairs? Automatic devices in order?

Note Defects If otherwise, did you fill them at once?

Casks and Pails found full? Are they satisfactory?

Watchman's Records Examined?

Hose Houses

HOSE HOUSE NO.	NO. FEET HOSE	NO. NOZZLES	NO. AXES	NO. BARS	NO. LANTERNS	NO. WRENCHES	NO. SPANNERS	ARRANGED O. K.
1								
2								
3								
4								

Note defects

Electrical Equipment

Are all fuses in good condition? Did you replace?

All panel boards, switches and fuse cabinets clean? Did you clean?

Do all cabinet doors latch properly? Did you have fixed?

Are motors clean externally and internally? Did you clean?

Ample supply of oil in motor bearings? Did you oil?

Care and Cleanliness

Any rooms found dirty or in need of sweeping?

Loose oily waste found in any room? If so, where, and did you have it removed?

Inspected by Countersigned by Superintendent.

Date 19

List any remarks or recommendations on back of this sheet.

Fire-protective equipment chart provides for weekly check of sprinklers, valves, pump, fire doors, hoses, and electrical equipment. Original form 8½ X 14, printed

Property-damage report, made in triplicate, supplies check to superintendent, plant engineer, and cost department on any damage to company property. Original form 8½ X 11, printed

Watchman's report used in checking conditions found on rounds. Original form 4¼ X 5½, printed

PROPERTY DAMAGE REPORT

FIRE – WATER – ETC. Superintendent's Copy

Dept. _____ Date _____ Time _____

Description _____

Causes _____ Future Prevention _____

Loss _____

Material	Labor	Expense	Total Cost

Time of Detection _____

Duration _____

No. of Sprinklers Opened _____ Nº 401

No. of Chemicals Used _____

Signed _____

BUILDING SERVICE PATROL

Date..... Route.....

Mr. .....

I have the following to report:

Items checked "YES" must be explained in detail.

WERE THERE ANY	YES	NO	
Rounds missed?			
Stations missed?			
Doors or windows open?			
Visitors?			
Trespassers?			
Fires?			
Fire hazards?			
Smoking violations?			
Rubbish accumulations?			
Unsanitary conditions?			
Fire Extinguishers missing			
Sprinkler system defects?			
Injury hazards?			
Waste light, water, air, power, etc. ?			
Infractions of rules?			
Fire Doors blocked open inoperative ?			
Exits dangerous condition obstructed ?			
Give Bldg. No. & Floor			Patrolman.....

WRITE ON BOTH SIDES OF PAPER

Mill-building inspection chart permits check up of condition of structural and other items, and estimate of labor and material for needed repairs. Original form 8½ X 11, made on duplicator

INSPECTION OF MILL BUILDINGS

Date_____

(Inside Inspection)

Mill	Floor	Section

Check on Condition of Following

Item	Remarks
Walls	
Floors	
Window Frames	
Sills	
Piers	
Columns & Caps	
Beams & Trusses	
Platforms	
Inside Doors	
Paint	
Drinking Fountains	
Light Drops & Reflectors	
Elevators	
Stairways	

Estimate of Labor and Material needed for Repairs

Material	Labor

List additional labor and material on other side of this sheet.
Condition in General:

INSPECTION REPORT

DATE_____ SHIFT 1___ 2___ 3___

YARD	Rubbish not Picked up	Grass	Brush
	Untidy Places		
FENCES	Material Exposed to Weather--Wool	Loose Posts	Posts out of Line
	Other Material	Barbed Wire Damaged	Place Needing Repair
	Spaces under Fence		
OUT BUILDINGS	Bamboo Pole Shed	Barn & Annex in Back of Spinning Bldg.	
	Wool Lean-to	Shook Shed	Waste Shed
	Yarn House & Annex		
GATES	#1 Condition	Locked	Open
	#2 "	"	"
	#3 "	"	"
	#4 "	"	"
FLOORS	Broken Boards	Holes	Broken Concrete
	Projections		
PARKING SPACES	Cars Parked Improperly	Broken Flag	Aisles Blocked
CEILINGS	Untidy	Prowlers	
LEAKS	Roof	Class	Water Line
	Steam Line	Faucets	
	Unit Heaters	Toilets	
WALLS	Untidy	Heating Coils	
DOORS	Clothing Hanging Carelessly	Holes	Exit
	Will not Close		
WINDOWS	Broken	Fire	Left Open
	Broken		
ELECTRIC EQUIPMENT	Light over Switch Boxes	Left Open	Motors Running
	Lights Burning where not needed	Lights Missing	
	Fuse Boxes Open	Broken Reflectors	
	Lights on Watchman's Route		
FIRE EQUIPMENT	Droplights Tied Back	Fire Doors	
	Small Extinguishers	Large Extinguishers	
	Hose (Small)	Hose Houses	
	Lanterns	Fire Pump	Axes
HEATING	Report Rooms over 70°		
	Report Unit Heaters Running when not Needed		
	Excessive Heat on Dryers when not in Operation		
GENERAL	Trucks Improperly Parked		
	Persons out of their Dept.		
	No Trespassing Signs Broken	Truck Headlights	
	" Signal "	Toilets Defaced	
	" Untidy		
	Showers "		

INSPECTOR_____

Mill-housekeeping inspection form for checking condition of yard, buildings, and auxiliary equipment. Original form 8½ X 13, made on duplicator

OVERHAULERS' CHECK-CHART

Spinning Department

Mill _____ DATE _____

Frame No. _____ S.A. No. _____ Reqn. No. _____

Frame Cleaned _____

Frame Overhauled _____

Elements of work to Clean Spinning Frame

1. Take out rolls and clean _____
2. Clean roll stands _____
3. Clean long draft aprons _____
4. Rework long draft aprons _____
5. Clean idlers and spindles _____

Elements of work to Overhaul Spinning Frame

1. Scrub steel rolls _____
2. Clean long draft aprons _____
3. Change all long draft aprons and top rolls _____
4. Align and level frame _____
5. Align and level steel roll stands _____
6. Plumb spindles _____
7. Set thread guides and lids _____
8. Clean head ends and oil pipes _____
9. Tighten frames _____
10. Replace all worn gears and studs _____
11. Set traveler cleaners _____
12. Remove and clean idler pulleys _____
13. Replace worn idler bushings _____
14. Remove old oil from bases and replace with new oil _____
15. Clean lifting rod bushings _____
16. Set roving traverse _____
17. Replace worn and broken bolsters _____
18. Repair roll necks and apron carriages _____
19. Repair cylinder where needed _____
20. Install cylinder bearings where needed _____
21. _____

MATERIAL USED: _____

SHOP WORK- Description: _____ Amount _____

LABOR USED: _____ Hrs. @ _____ " _____

" " _____ " _____

" " _____ " _____

" " _____ " _____

SIGNED: _____

APPROVED _____

MAINTENANCE REPORT

DATE _____

TO BE SENT TO THE OFFICE EVERY DAY

Mach. No.	Spindles Oiled	Spindles Washed	Spindles Leveled	Sticky Swinging Gates	Poor Springs	Machine Cleaned	Belt Checked

This is to certify that all defects found have been corrected, and that all the above Machines are in perfect condition.

OILER _____ OVERSEER _____

OVERHAULERS' CHECK-CHART

Twisting Department

Date _____

Mill _____ S.A. No. _____ Reqn. No. _____

Frame No. _____

Elements of Work to be done in overhauling Twisting Frames

1. Align and level _____
2. Take off and replace all double rolls, straighten and reneck _____
3. Take off and replace all stands after having been reworked _____
4. Plumb spindles _____
5. Replace worn bases and bolsters where needed _____
6. Tension pulleys removed, cleaned and packed with grease _____
7. Knee brakes removed and cleaned _____
8. Level tension weights and replace all ropes _____
9. Check and replace all worn gears and studs in head, also builder shafts, studs, and cams where needed _____
10. Adjust traverse motion where jumping on the change _____
11. Reset guides and replace guide boards _____
12. Replace lifting rods and bushings where needed _____
13. Thoroughly clean _____
14. On cable twisters tighten spindles in creel _____
15. Tighten and adjust cylinders _____
16. Repair doffer guards _____
17. _____

MATERIAL USED: _____

SHOP WORK- DESCRIPTION: _____

LABOR USED: _____ Hrs @ _____ Amount _____

" " _____ " _____

" " _____ " _____

" " _____ " _____

" " _____ " _____

SIGNED: _____

APPROVED: _____

Maintenance report provides check on regular attention to oiling, washing, leveling, cleaning, etc. of throwing machinery. Original chart 8½ X 11, printed.

Check-charts indicating work to be done in overhauling spinning and twisting frames. Original forms 8½ X 11, made on duplicator

KNITTING MACHINE REPAIR CHART

Machine # . . . . . .Size . . . . . Cut . . . . . Feeds . . , . . . Make . . . . . .

	DATE FIXED	CHECKED BY	PARTS USED
TAKE-UP			
Rolls 1. See that there are no burrs on rolls. 2. Make sure rolls turn freely. 3. Set cloth so it goes through without pressing and leaving lines.			
Gears 1. Replace worn gears. 2. Make sure gears turn freely. 3. See that gears mesh properly.			
Stop chain 1. Check for weak links. 2. Set to stop machine if rolls drop too low or refuse to function.			
Belt 1. See that belt is not too tight. 2. See that belt has no weak places.			
BRAKE 1. Check brake spring. 2. See that brake leather is not too worn. 3. Make sure brake stops machine soon enough.			
CLUTCH 1. Make sure clutch is not slipping.			
CYLINDER 1. Check cylinder walls. 2. Make sure cylinder needles are not wearing through top of cylinder. If cylinder is worn slightly, smooth with stone; if worn too much, have reconed or replaced. 3. See that dogs are smooth.			
DIAL 1. Check dial walls. 2. Make sure dial needles are not wearing through			

	DATE FIXED	CHECKED BY	PARTS USED
bottom of dial. If so, fix as above. 3. See that dogs are smooth.			
CYLINDER CAMS 1. Smooth surface of all cams. 2. Make sure all stitch cams are ground alike. 3. See that no cams are too short, letting needles drop between cams.			
DIAL CAMS 1. Smooth surface of all cams. 2. Make sure all stitch cams are ground alike. 3. Put all sections on dial cap and see that cams are fitted so no butts will catch.			
CARRIERS 1. See that all carriers are smooth. 2. Check holes in carriers to see if yarn has worn grooves in them.			
STOP MOTION 1. See that stop motion is working at every feed. 2. Make sure stop motion stops machine quickly enough.			
NEEDLE PROTECTOR 1. See that finger is set close enough. 2. Check plunger and see that it does not stick. 3. Make sure finger is set in correct position.			
CYLINDER AND DIAL NEEDLES 1. Make sure needles are not bent. 2. Make sure latches are not loose or stiff. 3. See that hooks are not opened, thereby letting latch drop inside. 4. Check throat for roughness.			

FILE NO _____

JANITOR SERVICE REPORT

SECTION _____ DATE _____

DEPARTMENT	SUPPLY DISTRIBUTION				
	TOILET TISSUE	PAPER TOWELS	LIQUID SOAP	HAND SOAP	DISINFECTANT
DYE HOUSE					
DYED BLENDING					
WEAVING-1ST FL. (Men)					
WEAVING-2ND FL. (Women)					
WEAVING-2ND FL. (Men)					
WAREHOUSE-FINISHING					
FINISHING-LOWER (Men)					
FINISHING-LOWER (Women)					
FINISHING-UPPER (Men)					
FINISHING-UPPER (Women)					
AXMINSTER SETTING					
VELVET SETTING					
MACHINE SHOP					
BOILER HOUSE					

REMARKS: _____

SIGNED _____
JANITOR

WEEKLY REPORT OF COMPLETED OVERHAULING

.....Mill Week Ending.....

CARDS

Card No.	Overhauled	New Cylinder	New Doffer	New Flats	Licker-in	Remarks

SLUBBERS

Frame No.	Make	Bobbin	Spindles	Overhauled	Cleaned	Remarks

INTERMEDIATES

Frame No.	Make	Bobbin	Spindles	Overhauled	Cleaned	Remarks

SPEEDERS

Frame No.	Make	Bobbin	Spindles	Overhauled	Cleaned	Remarks

SPINNING FRAMES

Frame No.	Make	Bobbin	Spindles	Overhauled	Cleaned	Remarks

TWISTERS

Frame No.	Make	Bobbin	Spindles	Overhauled	Cleaned	Remarks

Signed .....

Knitting machine repair chart gives check on date overhauled and parts used. Original form 8½ X 11, printed

Janitors' report provides check on sanitary supplies used in each department. Original form 8½ X 11, made on duplicator

Chart permitting weekly check-up of completed overhauling of cards, roving and spinning frames, and twisters. Original form 8½ X 11, made on duplicator

PHYSICAL EXAMINATION REPORT

Name _____ Age _____ Sex _____

DATE	DEPT.	WEIGHT	B. P.	HEART	LUNGS	EYES	TEETH	THROAT	URINE	HERNIA	REMARKS

APPLICATION FORM

FOR _____ DATE _____

NAME _____ ADDRESS _____ PHONE _____

AGE _____ DATE OF BIRTH _____ PLACE OF BIRTH _____ CITIZEN _____ S. S. # _____

SEX _____ SINGLE / MARRIED _____ RELIGION _____ CHILDREN _____ OTHER DEPENDENTS _____ NATIONALITY _____

LIVE WITH PARENTS _____ OWN HOME _____ RENT _____ BOARD _____

PHYSICAL DEFECTS _____ RUPTURED _____ HEIGHT _____ WEIGHT _____ EYES _____ SIGHT _____ COLOR BLIND _____

SPECIAL TRAINING _____ HAIR _____ GRADE SCHOOL _____ HIGH SCHOOL _____

RELATIVES EMPLOYED HERE _____ DEPT. _____ RELATIONSHIP TO EMPLOYEE _____

NAMES OF PRESENT EMPLOYEES YOU KNOW, IF ANY _____ U. S. SERVICE RECORD _____

OTHER REFERENCES _____ SIGNATURE OF APPLICANT _____

INDUSTRIAL HISTORY RECORD

LENGTH OF SERVICE	FROM	TO	NAME AND ADDRESS OF PREVIOUS EMPLOYERS	POSITION	REASON FOR LEAVING

REMARKS:

EMPLOYEES BUDGETED AND ACTUAL

CLOTH ROOM _____ WEEK ENDING _____ 19__

	FIRST SHIFT		SECOND SHIFT	
	BUDGET	ACTUAL	BUDGET	ACTUAL
Overseer	1			
Cloth Checker	1		1	
Calender hands	3		1	
Head inspector	1		1	
Inspectors	15		11	
Baler	1		1	
Stamper	1			
Sewer	1		1	
Roller Mch. Man	1			
Cloth grader				
Folders	2		2	
Stitchers	1		2	
Cloth Distributor	2		1	
Sweeper & Cloth trucker	1			

Physical examination report provides for periodical check-up of employee's health. Original form 8½ X 11, printed

Application blank permits check-up of prospective employee's personal and business history. Original form 8½ X 11, printed

Departmental employee budget shows weekly comparison between theoretical and actual number of persons employed. Original form 8½ X 11, made on duplicator

Labor-turnover report gives data by departments on employees hired, terminations, per cent turnover, and reasons for leaving. Original form 8½ X 11, printed

Termination of employment form gives check by individuals on reasons for leaving. Original form 8½ X 11, printed

LABOR TURNOVER REPORT

_____ Mill

_____ Weeks Ended _____

DEPARTMENT	THIS PERIOD				SINCE SEPT. 1st			
	Average on P/R	Employed	Left	Turnover %	Average on P/R	Employed	Left	Turnover %
TOTALS								
General and Outside Help								
Casual Help								
TOTALS								

SUMMARY OF REASONS FOR LEAVING

REASON GIVEN	No.	REASON GIVEN	No.

Correct:

_____

TERMINATION OF EMPLOYMENT

Date _____

To Paymaster:

Name of Employee _____

Last Day Worked _____

REASON FOR TERMINATION

Voluntary

- ☐ Sickness
- ☐ Family
- ☐ Better Job
- ☐ Not Enough Pay
- ☐ Dissatisfied
- ☐ Unknown
- ☐ _____

Discharged

- ☐ Misconduct
- ☐ _____
- ☐ Diamissed
- ☐ Incompetence
- ☐ Work Unsatisfactory
- ☐ End of Substitution
- ☐ End of Temporary Period

Other

- ☐ Trade Dispute
- ☐ Act of God, Fire, Etc.
- ☐ Refused Suitable Work
- ☐ Refused Reinstatement
- ☐ Failure to Report
- ☐ _____
- ☐ Laid Off and Benefits Paid

Give below detailed statement of exact reason for termination.

Liability Terminates _____

Replaced by _____

( ) Recommended ( ) Not recommended for re-employment

Foreman _____ Superintendent _____ Paymaster

Employee's eligibility for benefits is clearly described under the law, copies of which are on file in employment office.

Employee Protest: If employee does not agree with Company Statement made above, employee may protect rights to unemployment compensation by writing below employee's version of the reason or cause of employment termination. Doing so will not in any way interfere with final payment of wages due.

I hereby acknowledge receipt of final wages due me and certify that the foregoing is a true statement of the reason or cause for the termination of my employment.

Signed _____

(File in Employee Record File)

PLANT SAFETY INSPECTION REPORT

Department: .....

Date of Inspection: .....

Name of Inspectors: .....

FIRE HAZARD: Are all fire fighting appliances ready for immediate use? Are fire exits and fire escapes clean and in good condition? Is plant kept free from excess inflammable waste and rubbish? Are explosive materials properly handled and stored?

FLOORS, FLOOR OPENINGS, WALLS AND HOISTWAY OPENINGS: Are all openings properly guarded? Note condition of floors; see that floor surface is free from protruding nails, splinters, holes, slipperiness, uneveness and loose boards.

STAIRS: Are handrails sufficient and substantial? Are treads in good condition and is light sufficient?

LADDERS: Are they in good repair? Are safety feet needed?

ELEVATED RUNWAYS AND PLATFORMS: Are they in good condition, clear of obstructions, and provided with handrails and toeboards? Is material piled safely away from edge?

TRANSMISSION EQUIPMENT: Are belts, pulleys, shafting, set screws, and other projecting revolving parts guarded?

MACHINE HAZARDS: State what guards are found not in use, and where guards should be provided. This should include dangerous operating points, all gears, sprocket chains, belts, pulleys, clutches, shafting, spindles, and all other dangerous revolving or reciprocating parts.

Plant safety and inspection report gives check on fire and machine hazards, and condition of buildings and auxiliary equipment. Original form 7 X 11, printed both sides

ACCIDENTS

Overseer .....

Date .....

NAME	DEPT.	INJURED	EXTENT OF INJURY

FIRST AID ROOM.

Accident report sheet provides data on employees injured and extent of injuries. Original form 4 X 6½, printed

ELEVATORS AND OTHER HOISTING EQUIPMENT: Note condition of signal system, cables, safety devices, gates, car and shaftway protection, car and landing lighting.

POWER TRAVELING (BRIDGE) CRANES: Note condition of footwalk, railing ladders and safety appliances.
Is signal used to warn workmen?
Are safety valves, water gauges, engine stops test

ELECTRICAL EQUIPMENT: Note condition of switchboard, transformers, wiring and controlling and operating apparatus and see that they are properly protected or isolated, and dead parts grounded.

BOILERS, PRESSURE APPARATUS: When last inspected? How often blown down and washed? Are safety valves, water gauges, engine stops, tested frequently?

HANDLING MATERIAL: Note trucking passageways, obstructed view at corners, railroad access, hoists needed, piling and storing, yard conditions, nails, glass, sharp edges, hand tools, acids, caustics, gases, dusts.

FIRST AID: Note condition of supplies, cleanliness, if easy of access, a stretcher available.

GOGGLES, RESPIRATORS: Are they available? Are they worn?

SANITATION: Note light, windows clean, lamps need shades, ventilation, drinking water, washing facilities, clothes lockers, toilets, cuspidors.

BULLETINS POSTED? ..... NUMBER? .....

MILL CHECK-UP NUMBER

ACCIDENT ANALYSIS

Acc. Freq. per $100,000 Payroll = $\frac{\text{Accs. x 100}}{\text{Payroll in Thousands}}$

CAUSES NON-MECHANICAL	Previous Years 1939 Tot. Accs.	1939 Days Lost	1940 Tot. Accs.	1940 Days Lost	Current Year — 1941 Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Bumps and cuts																
Burns																
Dropping Objs. (Hand)																
Eye Injury																
Falling Objects																
Falls of Persons																
Hand Tools																
Infections (Minor)																
Strains and Hernias																
Nails and Splinters																
Vehicles																
Bites																
MECHANICAL																
Elevators																
Machines																
Belts																
Acc. Freq. (Cumulative)				Tot. / L.T.												
No. Accs. (Cumulative)				Tot. / L.T.												
Payroll Cum. (Thousands)																
Payroll for Month																
Accidents				Tot. / L.T												
Days Lost																

SUPERVISOR'S ACCIDENT REPORT

(This form does not take the place of the regular accident report to be sent to the insurance carrier, or any legal form required.)

Name of Employee { Customer }

Store

Date and hour of accident

Date

Statement of how and just where accident occurred

Before the accident what specific safety instructions in regard to this particular situation were given?

How can such accidents be prevented?

Reviewed by:

1. 2. 3. 4.

Signature of Supervisor

TO BE MADE OUT AND RETURNED TO

Accident analysis chart permits breakdown of number and causes of accidents, time, cost, and frequency. Original form 8½ X 11, typewritten

Supervisor's accident report gives mill executives check on cause of individual accidents and suggested preventive methods. Original form 8½ X 11, printed

DISTRIBUTION OF SUPPLIES AND REPAIR COSTS

Dept._____ Mill_____ Month_____

	Total
Machine Parts	
Cots (Cork)	
Travelers	
Tape (Spinning)	
Tape Thread (Sewing)	
Roller Belts	
V- Belts	
Lamp (Electric)	
Brooms (Sweep)	
Toilet Tissue	
Brooms (Whisk)	
Brushes	
Leather Belting	
Belt Hooks	
Oil	
Oil Cups	
Files (Steel)	
Emery Cloth	
Sandpaper	
Crayon	
Belt Cement	
Cement Reducer	
Ink	
Pencils	
Tablets (Pen & Pencil)	
Scratch Pads	
Printed Forms	
Casting (Foundry)	
Air Hose & Fittings	
Humidifier Parts	
Screws, Bolts, Etc.	
Hacksaw Blades	
Grease	
Disinfectant	
Scrub Powder	
Abrasive Wheels	
Flashlight Parts	
Freight	

Departmental supply-distribution charts show total quantity of supplies consumed monthly. Original forms 8½ X 11, made on duplicator

INTER-DEPARTMENTAL EXCHANGE OF MATERIALS AND SUPPLIES

CREDIT — DEPT. — OPR. NO. — AMOUNT

CHARGE — DEPT. — OPR. NO.

DESCRIPTION | COST | VALUE

OVERSEER — DATE

THIS BLANK MUST BE PROPERLY FILLED IN EACH TIME THERE IS AN EXCHANGE OF MATERIALS

Name of Part — Part No. — Min.

Bought of — Bin No. — Max.

RECEIVED								DELIVERED					BAL. ON HAND	
Date Inv.	Order No.	Bought of	Quantity	Invoice Cost	Frt. Added	Total Cost	Cost Each	Date	Dept.	Quantity	Cost Each Including Frt.	Amount	Quantity	Value

Supply-exchange slip provides check on materials transferred from one department to another. Original form 4 X 7½, printed

Perpetual supply inventory shows receipts, disbursements, and costs. Original form 5 X 8 cardboard, printed

DYE FASTNESS TEST

Dye _____

Class _____

Color Index No. _____

Supplier _____

Date Received _____

Container No. _____

Our Order No. _____

_____% Dyeing

ATTACH SWATCH HERE

TESTS	% DYEING	% DYEING
Laundering, Laboratory		
Laundering, Commercial		
Dry cleaning		
Chlorine		
Peroxide		
Heat		
Perspiration		
Crocking		

METHODS OF TESTS

Laundering, Laboratory: A.A.T.C.C.

Laundering, Commercial: Samples sent to laundry and given light colored wash. (Hot water, soap, and light chlorine)

Dry cleaning: Samples sent to commercial dry cleaner and given regular dry clean- with Stoddard solvent.

Chlorine Test: A.A.T.C.C.

Peroxide Test: A.A.T.C.C.

Scrubbing Test: Wet out sample and sprinkle soda ash over area to be scrubbed; scrub this area 10 times with stiff brush and rinse; repeat this 15 times and dry.

Heat Test: 30 sec. 300° F.

Light Test: Keep in F-O until color breaks.

Perspiration Test: A.A.T.C.C.

Crocking Test: A.A.T.C.C.

Color card provides space for dyed swatch and listing of fastness properties of dye tested. Original form 8½ X 11 cardboard, made on duplicator

NEEDLE CHART

Machine	Needles	Stock		
		Normal	Low	Order
Brinton-64 Feed 18 Cut	#3 42-Gage SBSL Sys. #6007CS	1,000	750	500
Cooper-12 Cut	Top Cyl. #12 TSJ Long	500	300	300
	Bottom Cyl. #12 BSJ	500	300	300
Scott & Wms.-16-Cut Interlk.	Dial-Short #711-42-Gage Sys. #6808D	750	500	250
	Dial-Long #710-42-Gage Sys. #6807C	750	500	250
	Cyl.-Short #709-42-Gage Sys. #6806C	750	500	250
	Cyl.-Long #708-42-Gage Sys. #6805C	750	500	250
Wildman-10 Cut Rib	Dial-30-Gage Sys. #4515D	750	500	250
	Cyl.-#4 24-Gage SL Sys. #4759C	750	500	250

Needle chart for insuring adequate supply of needles also gives knitter check on type to be used on each machine. Original form 8½ X 11 cardboard, hand drawn

DEPARTMENT EXPENSE ANALYSIS

YEAR

		ACTUAL	BUDGET	VARIANCE	ACTUAL TO DATE	ACTUAL	BUDGET	VARIANCE	ACTUAL TO DATE	ACTUAL	BUDGET	VARIANCE	ACTUAL TO DATE	ACTUAL	BUDGET	VARIANCE	ACTUAL TO DATE

ANALYSIS OF WEEKLY PAY ROLL

WEEK ENDING

DEPARTMENT	COST UNIT	STANDARD WEEKLY UNITS	STANDARD COST PER UNIT	ACTUAL WEEKLY UNITS	STANDARD PAY ROLL	ACTUAL PAY ROLL	OVER OR UNDER	REMARKS
			HOURLY LABOR					
PICKING	PICKER WEEK							
CARDING	CARD WEEK							
DRAWING	FIN. DEL. WEEK							
CARDING GENERAL	SPDL. WEEK							
SPINNING GENERAL	SPDL. WEEK							
SPOOL. & WARP. GENERAL	SPDL. WEEK							
SLASHING	SLASHER WEEK							
WARP DRAWING	100 ENDS							
WARP TYING	LOOM WEEK							
WEAVING GENERAL	LOOM WEEK							
FIXERS	YDS. PRODUCED							
CLOTH ROOM	LOOM WEEK							
GEN. LABOR—SHOP	LBS. PRODUCED							
GEN. LABOR—YARD								
SLUBBERS	SPDL. WEEK							
INTERMEDIATES	SPDL. WEEK							
SPEEDERS	SPDL. WEEK							
SPINNERS	SPDL. WEEK							
DOFFERS	SPDL. WEEK							
SPOOLING	SPDL. WEEK							
WARPERS & CREELING	WARPER WEEK							
WEAVERS	LOOM WEEK							
BATTERY HANDS	LOOM WEEK							

VARIATION FROM STANDARD LABOR AND EXPENSE

DEPARTMENT_____ MONTH_____ 194

ITEM	ACTUAL	BUDGET	Variance this Month	Variance to Date
Indirect Labor				
Backwinding Labor				
Non-Chargeable Labor				
Supplies				
General Expense				
Repairs				
Spoilage				
Materials				
Water				
Steam				
Power				
Maintenance				
Coal				
Bags				
Unemployment Tax				
Pension Tax				
Total Expense				
Direct Labor				
Total Labor and Expense				
REMARKS –				

Departmental expense analysis chart shows quarterly variance between actual and budgeted costs. Original form 11 X 16, printed

Weekly pay-roll analysis provides check by departments of standard vs. actual labor costs. Original form 8½ X 11, printed

Individual department labor and expense chart indicates monthly cost of each item and variance from normal. Original form 8½ X 11, printed

MILL..

ANALYSIS OF SUPPLY COST

WEAVE ROOM

Week Ending..

Sect.	No. Looms	Type Looms	LOOMFIXER	Loom Parts	Shuttles & Parts	Furs	Pickers	Picker Sticks	Leather Supplies	Roll Covering	Electric Supplies	Oils & Greases	Pick Wheels	Jacquard Supplies	Misc.	TOTAL
TOTAL COST																
COST PER 100 LOOM HOURS																

ANALYSIS OF SUPPLY COST (con't)

	PREPARATORY							CLOTH ROOM		
SHIFT	Quills & Beams	Reeds & Combs	Harness & Heddles	Warping & Slashing	Winding & Copping	Chemicals	TOTAL	Shipping Supplies	Misc.	TOTAL
TOTAL										
Cost per 100 Loom Hours										

GENERAL MAINTENANCE AND SUPPLIES

	Repairs to Mill	Machine & Shop	Boiler & Steam	Fuel	Village	Office Supplies	Misc.			TOTAL
TOTAL										
Cost per 100 Loom Hours										

SUMMARY OF COST

TOTAL NO. LOOMS..

TOTAL LOOM HOURS..

DEPARTMENT	TOTAL COST	PER 100 LOOM HOURS
Weave Room		
Preparatory		
Cloth Room		
Gen'l. Mtce. and Supplies		
TOTAL		

EXTRAORDINARY SUPPLIES USED (Included in above)

NO. UNITS USED	DESCRIPTION	COST	EXPLANATION (Use Budget No., if one)
	TOTAL COST		
	PER 100 LOOM HRS.		

ANALYSIS OF JACQUARD HARNESS SUPPLIES (See Weave Room)

	Jacquard Cyl.	Comber B'rds, etc	Hook & Mail Eyes	Neck Cords & Collets	Harness Oil	Harness Twine	Lingoes	TOTAL
Supplies Issued								
New Tie-Ups								
TOTAL								

REMARKS:

(Please indicate any increase of cost above normal)

CC: ACCOUNTING DEPT., MILL SUPT., FILE.

Supply-cost analysis gives weekly check on parts and materials used in weaving mill. Original form 8½ X 11, printed on both sides

COST SHEET

*Date*_____

*Style*_____

DESCRIPTION	MATERIAL	WEIGHT	PRICE	AMOUNT
Material Cost:				
Welt and Underwelt				
Boot				
Foot and Plated Sole				
High Splicing and Heel				
Low Heel				
Sole				
Toe (Heavy)				
Toe (Light)				
Looping and Seaming				
Total Silk				
Total Cotton				
Total Material				
Waste Allowance %				
Total Material Cost				
Labor and Manufacturing Expense:				
Direct Labor (Period to)				
Mfg. Expense (Period to)				
Dye and Fin. Supplies and Expense (Period to				
Royalty				
Total Cost– Finished				

Weekly Report of Power Plant Cost

Week Ending 19

Current Generated,	Kw. Hrs.
Coal consumed,	Tons
Lbs. water evaporated,	Lbs.
Steam delivered from boilers,	Lbs.
Steam delivered to turbine throttle,	Lbs.
Steam extracted from turbine,	Lbs.
Steam used for generating current,	Lbs.
Steam delivered to Mill, Dye House, etc.,	Lbs.
Steam delivered to Cloth Room, Laundry, etc.,	Lbs.
Total steam delivered for heating process,	Lbs.
Per cent of steam charged to current generated,	%
Per cent of steam charged to heating and process,	%

COST		
Total cost of coal @ $ per ton,		$
Cost of power plant labor,	$	
Cost of shop labor,	$	$
Total cost of labor,		$
Total cost of supplies,		$
Total operating cost,	$	
Per cent charged to current generated,	$	
Per cent charged to heating and process,		mills
Cost per Kw. Hour,		

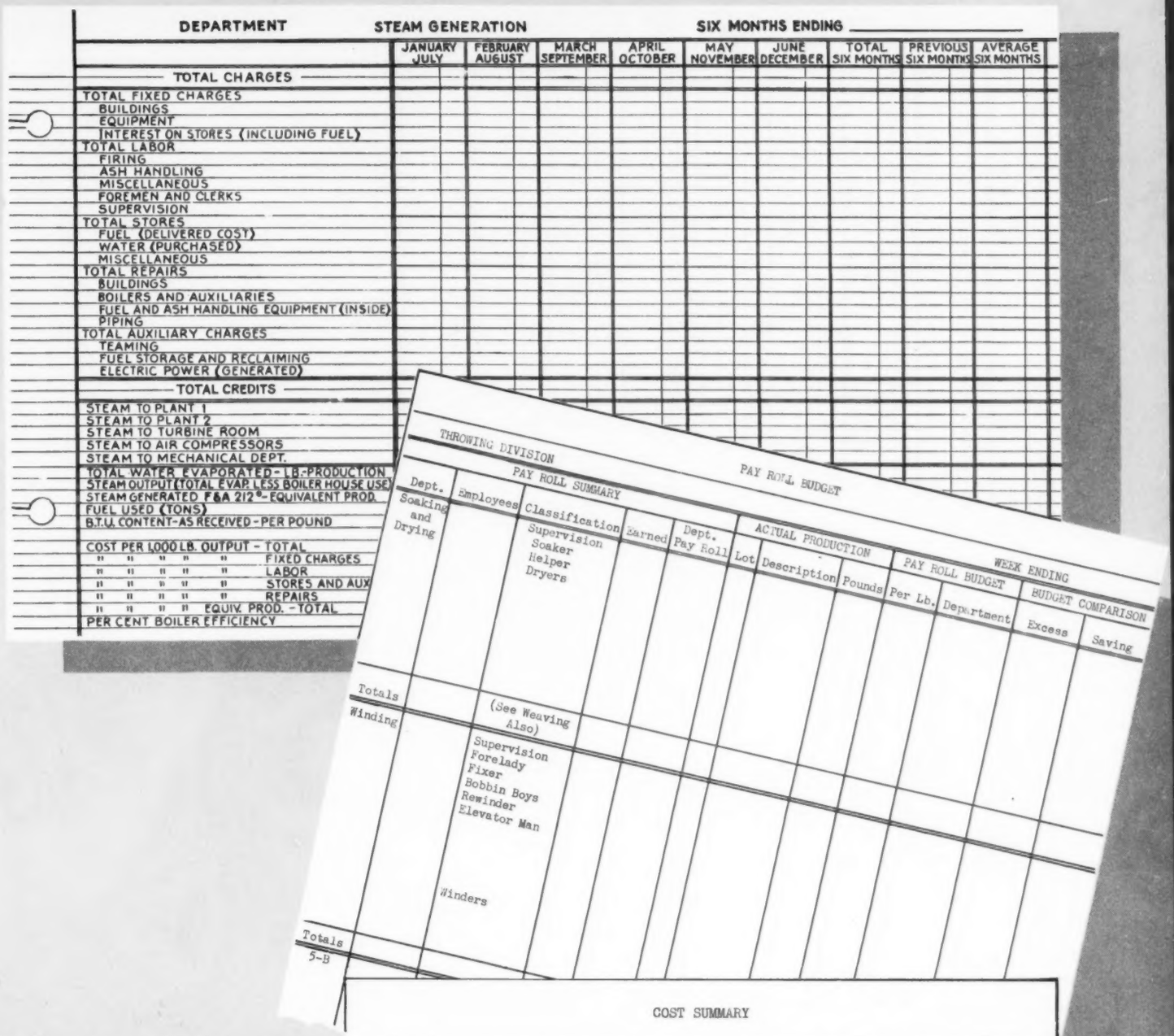
Remarks:—

Supplies used:—

O. K. M. Supt.

Cost sheet provides check on cost of individual styles of hosiery. Original form 7 X 8½, printed

Weekly power-plant report shows total operating cost and cost per kw. hr. Original form 8½ X 11, made on duplicator



DEPARTMENT STEAM GENERATION SIX MONTHS ENDING _____

	JANUARY JULY	FEBRUARY AUGUST	MARCH SEPTEMBER	APRIL OCTOBER	MAY NOVEMBER	JUNE DECEMBER	TOTAL SIX MONTHS	PREVIOUS SIX MONTHS	AVERAGE SIX MONTHS
TOTAL CHARGES									
TOTAL FIXED CHARGES									
BUILDINGS									
EQUIPMENT									
INTEREST ON STORES (INCLUDING FUEL)									
TOTAL LABOR									
FIRING									
ASH HANDLING									
MISCELLANEOUS									
FOREMEN AND CLERKS									
SUPERVISION									
TOTAL STORES									
FUEL (DELIVERED COST)									
WATER (PURCHASED)									
MISCELLANEOUS									
TOTAL REPAIRS									
BUILDINGS									
BOILERS AND AUXILIARIES									
FUEL AND ASH HANDLING EQUIPMENT (INSIDE)									
PIPING									
TOTAL AUXILIARY CHARGES									
TEAMING									
FUEL STORAGE AND RECLAIMING									
ELECTRIC POWER (GENERATED)									
TOTAL CREDITS									
STEAM TO PLANT 1									
STEAM TO PLANT 2									
STEAM TO TURBINE ROOM									
STEAM TO AIR COMPRESSORS									
STEAM TO MECHANICAL DEPT.									
TOTAL WATER EVAPORATED - LB.-PRODUCTION									
STEAM OUTPUT (TOTAL EVAP. LESS BOILER HOUSE USE)									
STEAM GENERATED F&A 212°-EQUIVALENT PROD.									
FUEL USED (TONS)									
B.T.U. CONTENT-AS RECEIVED-PER POUND									
COST PER 1000 LB. OUTPUT - TOTAL									
" " " " " FIXED CHARGES									
" " " " " LABOR									
" " " " " STORES AND AUX									
" " " " " REPAIRS									
" " " " EQUIV. PROD. - TOTAL									
PER CENT BOILER EFFICIENCY									

THROWING DIVISION PAY ROLL BUDGET

PAY ROLL SUMMARY

Dept.	Employees	Classification	Earned	Dept. Pay Roll	ACTUAL PRODUCTION Lot	Description	Pounds	PAY ROLL BUDGET Per Lb.	Department	WEEK ENDING BUDGET COMPARISON Excess	Saving
Soaking and Drying		Supervision Soaker Helper Dryers									
Totals											
Winding		(See Weaving Also) Supervision Forelady Fixer Bobbin Boys Rewinder Elevator Man Winders									
Totals											

5-B

COST SUMMARY

Lot	Gray Yards	Finished Yards	Gray Weight	Finished Weight	Gray Value	Gray Mill	Construction	Yardage Guaranty	Finish'g. Price	Standard Cost	Actual Cost

DEPARTMENT	COST PER YARD	COST PER POUND	REMARKS
Receiving			
Gray Room			
Singer			
Kiers			
Mercerizing			
Bleach House			
Dry Cans			
Dyehouse			
Drying			
Packing			
Shipping			
Process Cost			
Selling Cost			
Total			

Power-cost report permits semi-annual check of all power plant charges and credits. Original form 11 X 16, typewritten

Payroll budget permits mill manager to check on whether departments are exceeding or staying within predetermined labor costs per unit of product. Original form 8½ X 20, made on duplicator

Cost summary gives check on actual vs. standard cost for dyeing and finishing. Original form 5 X 8, made on duplicator

PAGE_____

VILLAGE SURVEY

NUMBER:
SINGLE DOUBLE
ROOMS:
ROOM FOR BATH:

REPAIRS	1st YEAR	2nd YEAR	3rd YEAR	NON-ESSEN.
1. Brick Foundation				
2. Weatherboarding				
3. Sills				
4. Windows				
5. Porches				
6. Termites				
7. Doors and Casings				
8. Floors-single or double				
9. Partitions				
10. Ceiling Interior				
11. Wiring				
12. Chimneys				
13. Fireplaces				
14. Flues				
15. Roofs				
16. Gutters and downspouts				
17. Screens				
18. Fences				
19. Garages				
20. Sheds				
21. Hardware				
22. Grading				
23. Toilets				
Total				
PAINTING				
A-INSIDE				
B-OUTSIDE				
C-TIN ROOFS				
Total				
Grand Totals				

TOTAL OVERALL EXPENSE-ALL ITEMS

GENERAL REMARKS

Village survey chart shows repairs made to mill houses over 3-yr. period. Original form 8½ X 11, made on duplicator

YARD AND VILLAGE REPORT

Week Ending_____

	LABOR Hrs.	LABOR Rate	LABOR Amt.	LABOR Total	MATERIAL
POLICE PROTECTION					
SCHOOL					
SANITATION					
Repairs to Pipes					
Garbage					
Sewage					
Team Operation (30%)					
Overseer (30%)					
UPKEEP OF STREETS					
Labor					
Road Machine					
Truck					
Overseer (10%)					
PARKS AND SHRUBBERY					
Labor					
Team Operation (70%)					
Gardener (90%)					
UPKEEP HEDGES					
Labor					
Gardener (10%)					
COTTAGES					
Repairs					
Painting Cottages					
Painting Garages					
Overseer (60%)					
Misc.					
WELFARE					
TOTAL					
WAREHOUSE					
MILL YARD					
STEAM COAL					
MISCELLANEOUS					
ACCOUNTS RECEIVABLE COAL AND WOOD (LIST OF INDIVIDUAL CHARGES)					

Yard and village report gives weekly check on labor and material for upkeep. Original form 8½ X 14, made on duplicator

Village Health Report

Week Ending ____

MEDICAL

SURGICAL

Prenatal

Maternity

Number of Deaths

Unsanitary Houses

Unsanitary Yards

Amount Spent for Welfare

Total Visits Made During Week

Remarks:

_____ Village Nurse

Nurse's village-health report permits weekly check on medical and surgical cases, and sanitation. Original form 8½ X 11, made on duplicator

TEXTILE EQUIPMENT NEWS

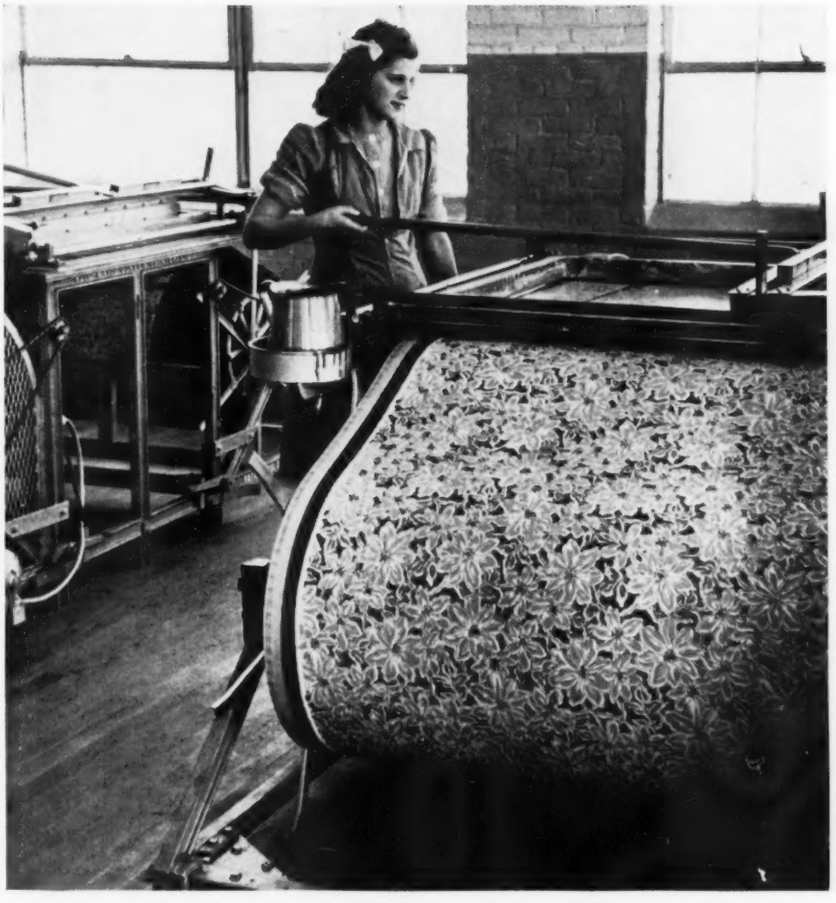
Rotary Machine for Screen Printing

For screen printing of textiles, a new system utilizing a rotary machine with stationary screen under which the fabric moves has been announced by Roto-Matic Screen Printing, Ltd., 450 Seventh Ave., New York. The new method is said to give excellent registration, to increase production, and to effect several operating economies. Either woven or knitted fabrics can be printed by this process. Originally developed in England the machine has recently been introduced in this country. An installation of the equipment at Princeton Knitting Mills, Watertown, Conn., is being used for screen printing on rayon knit goods. Two units of the machine in that plant are shown in the accompanying illustration.

A feature of the Roto-Matic machine is a long, rotary belt with a specially treated, hardened surface to which the fabric to be printed adheres without the necessity for pinning. The fabric is placed on the belt at one side of the machine, progresses to a printing panel and is rolled on the other side. At the lower right of the photograph is shown the printed fabric on the belt which is being wound on a cylinder. The cylinder is fitted with spider flanges having small spacers to allow air to pass over the printed surface of the fabric. A fan behind a protective grill on the cylinder forces the air over the fabric, thus drying the printing paste.

The screen at the top of the machine is counterbalanced. After one section of the fabric has been printed, the screen is raised. The printed section of the cloth is then wound onto the cylinder, and the next section to be printed comes under the screen. The registration marks are carried on the belt. No back-gray is required, and the belt is washed only when the pattern is changed. Speed of printing is said to be about 50% higher than with conventional methods. The small amount of floor space occupied by the machines is another advantage cited, the installation pictured having a total width of 7 ft. and a length of 9 ft. Still another advantage claimed is the saving in labor and the fact that the printing can be carried out by women operatives.

The same classes of dyes and types of printing pastes are employed as with older methods. Either silk or Nylon screen cloth has proved satisfactory. Pressure of the scraper used to force the paste through the screen can be adjusted according to the denseness of the pattern to be printed.



Rotary screen printing machine (Roto-Matic)

Duplex Take-Over for Dyeing Machines

Development of a dyeing-machine attachment that automatically feeds cloth in one continuous string instead of many individual strings has been announced by Rodney Hunt Machine Co., Orange, Mass. The new device, called the Duplex Take-Over, will considerably increase the capacity of a machine, and cut dyeing costs from 30 to 50%, according to the manufacturers.

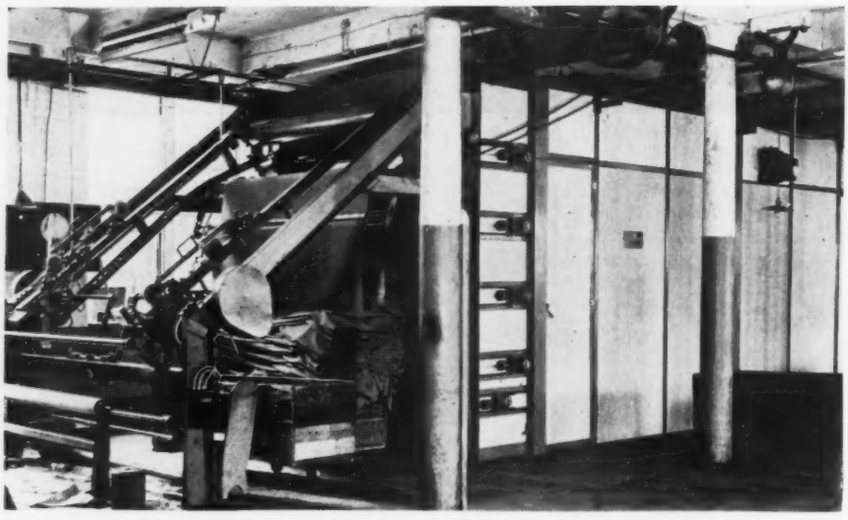
The take-over consists of a tapered reel and compensated weight mechanism attached to one side of the dyeing machine. As the single continuous string feeds through the machine, the reel-and-weight mechanism automatically controls it.

Since the cloth goes through in a continuous string, the necessity of making sure all cuts are the same length is eliminated. It also makes it more easily possible to obtain uniformity of dyeing, because every part of the cloth receives equal treatment in the machine.

Other savings by use of the device are said to result from elimination of time consumed in sewing up and tearing out seams on individual strings of cloth, and also the time needed to load and unload many strings instead of one. When dyeing is completed in a machine equipped with a Duplex Take-Over, only one seam has to be torn out in order to unload the whole tub.

A saving in fabric is also said to be achieved, because with the takeover it is not necessary to tear off the sewing on each piece when unloading the machine.

All weights of fabric, from the light-



Horizontal-type cloth dryer (Riggs & Lombard)

est rayon to the heaviest woolens, can be handled with equal ease and effectiveness, the manufacturers state, adding that the take-over has been tested in actual mill installations for over three years. The unit can be attached to dyeing machines already installed, in most instances.

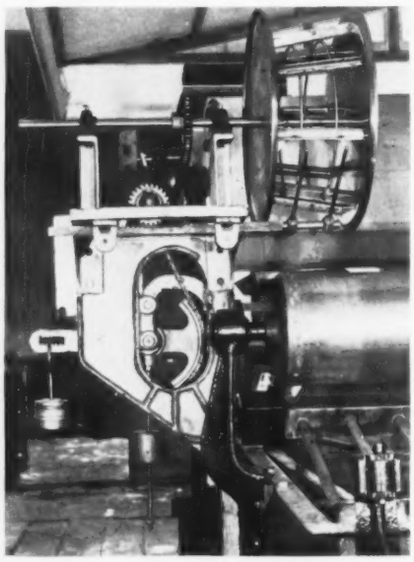
Micro-Set Padder

A recently announced improvement in padders manufactured by H. W. Butterworth & Sons Co., 2417 E. York St., Philadelphia, is the Micro-set system for applying pressures. The system is designed to give constant and accurate control of pressure from the very lightest up to 10,000 lb. on each side. This is said to give exact matches of shade, and to deliver cloth from the pad containing a minimum amount of moisture, thus aiding drying.

The micrometer pressure adjustment is easily applied by means of a handwheel, which is also used to raise the roll from contact when not in use. Another micrometer adjustment is utilized for applying pressure to each side of the roll. A pressure dial makes it possible for operatives to return to exactly the same pressure after opening rolls.

Rolls for padders equipped with the Micro-set system are built in sizes from 20 in. to 6 in. diameter. The tub is stainless steel, with stainless-steel immersion rolls. The padder drives from a gear-reduction motor, but compound gears can be supplied if desired. The machine can be operated as a unit by addition of friction let-off and winder, or in range with other machines.

Two- and three-roll padders and laboratory-size machines are available with the Micro-set pressure system, and the equipment can likewise be applied to older-model padders already installed.



Duplex Take-Over attachment on piece-goods dyeing machine (Rodney Hunt)

Horizontal Cloth Dryer

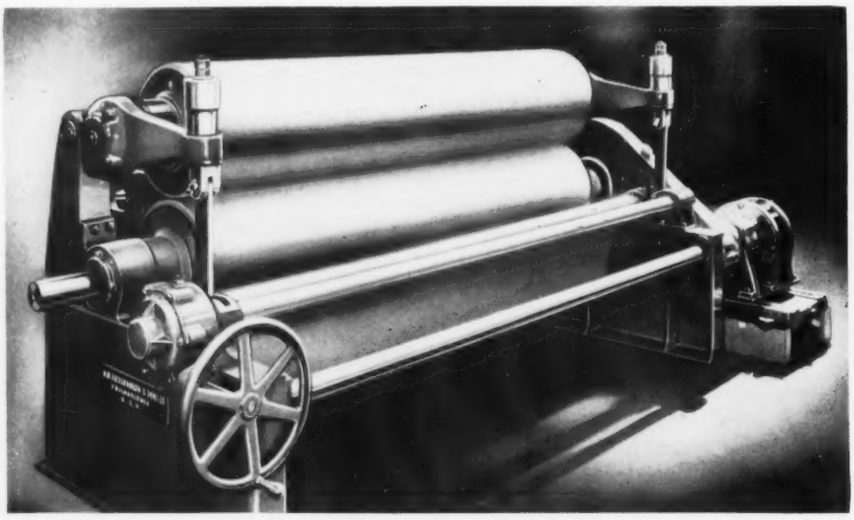
A horizontal-type cloth dryer has been recently introduced by Riggs & Lombard, Inc., Lowell, Mass. Cloth is fed into the machine at the top and passes through it in horizontal loops, delivering at the bottom of the same end. The loops form pockets in alternate passes, into which hot air is blown. All of this air is forced through porous fabrics, part going to the exhaust and the balance back to the heaters. Dampers at the ends of the pockets can be opened to convert the machine to an all-surface-type dryer for non-porous fabrics. The damper mechanism is fastened to the tracks, which are adjustable to various widths.

The dryer is equipped to maintain graduated temperature zones and thus prevent over-drying. The machine can be obtained in sizes ranging up to 18 passes high, and as long as required. Drying speed is from 3 to 50 yd. per min., depending on the type of fabric being handled.

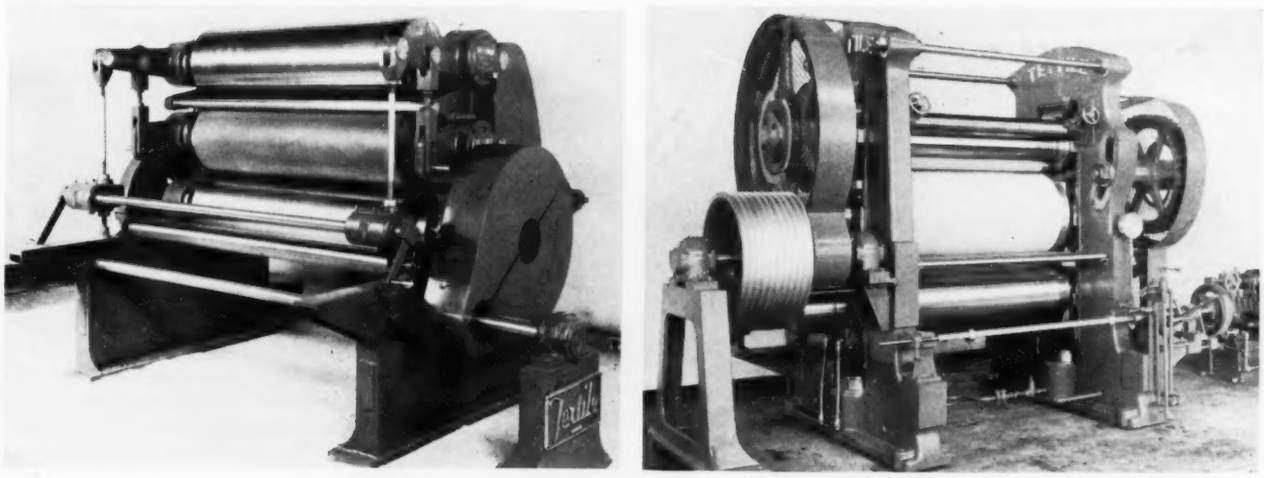
Three-Roll Padder

A three-roll padder of a new type has recently been developed by Textile-Finishing Machinery Co., Providence, R. I. It has a framework of all-welded-steel construction, supporting top and bottom stainless-steel rolls, and the middle rubber-covered roll. All three rolls have steel shafts running all the way through the bodies.

All rolling parts, including the pins and rods in the pressure attachments, are fitted with anti-friction bearings. Main bearings for the three rolls are



Two-roll, Micro-Set padder (Butterworth)



Left, three-roll padder; right, heavy-duty calender (Textile-Fnishing)

of heavy, roller-type, spherical, self-aligning design.

Pressure is applied by compound levers and weights, permitting pressures of from three to seven tons per side. A feature cited is the novel method of manipulating the weights and levers for applying pressure. The padder is equipped with special worm and worm-wheel connections incased in cast-iron housings and fitted with cross-shaft, hand crank, levers, or handwheels, as preferred. These are said to make easy separation of rolls and control of pressure.

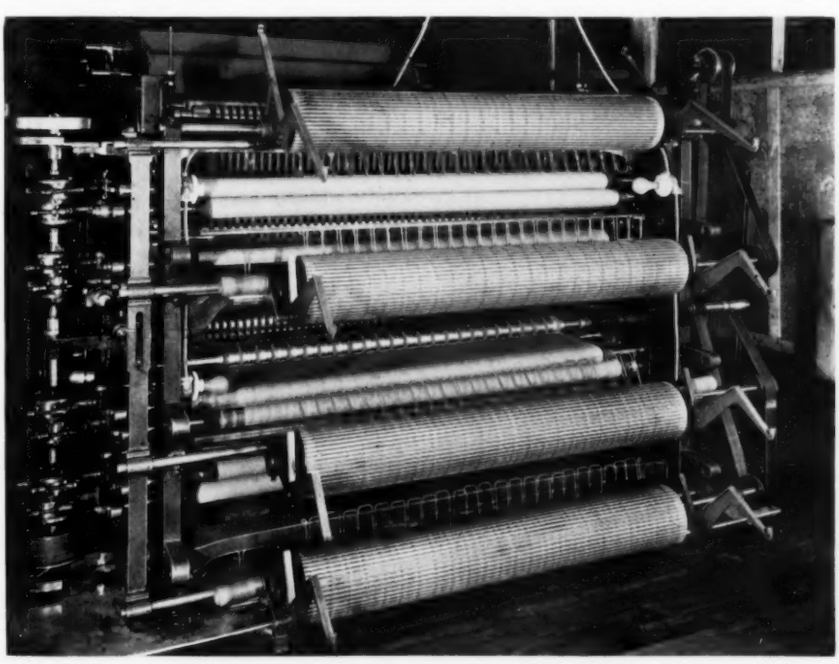
The dye-liquor tank is of close-fitting, all-welded-stainless-steel construction; the immersion roll is likewise of stainless steel.

Entering and delivery attachments are said to be of latest type, including an inclosed chain-driven batching apparatus, and optional entering attachments to suit requirements.

The padder is illustrated above. Also shown is a new three-roll, heavy-duty, hydraulic friction calendar made by Textile-Finishing Machinery Co. This calendar was described in last month's issue, but inadvertently the padder described this month was pictured.

Synthetic Rub Aprons

Synthetic rub aprons for the condensers of woolen-type cards, designed to reduce maintenance expense and improve product, are a new item recently announced by Boston Woven Hose & Rubber Co., Cambridge, Mass. The manufacturers state that on production runs in mill tests the new aprons have given increases in card-condenser production of up to 25% and increases in jack-spool capacity of from 40 to 50% by weight. Firmer, denser roving that runs better on spinning equipment, and reduced end breakage are also said to be achieved with the new aprons. Features of the aprons cited are that they stay clean longer and are easy to clean, resist oil, resist surface glazing and hardening, and retain a high surface coefficient of friction without surface treatment.



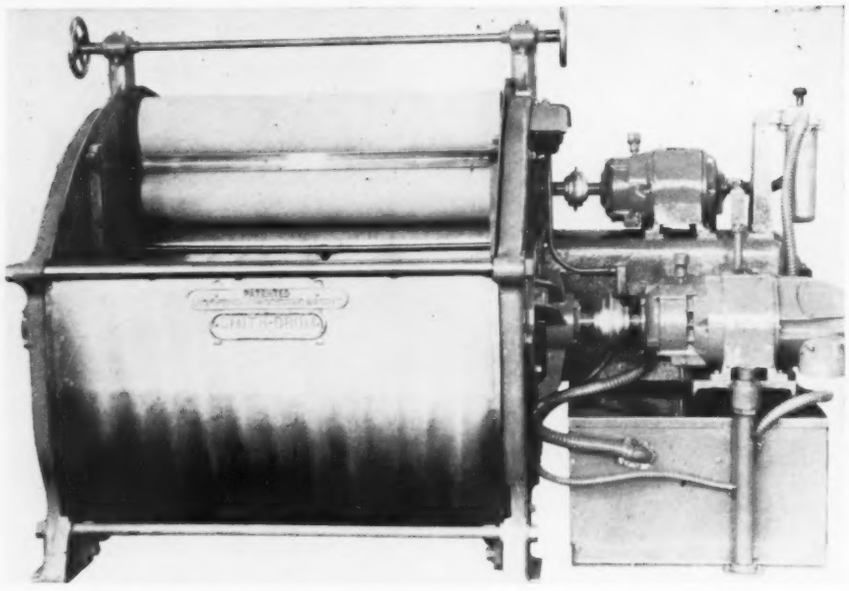
Synthetic rub aprons (Boston Woven Hose)

Saco-Lowell Improvements

To improve operation of their continuous strippers, Saco-Lowell Shops, 60 Batterymarch St., Boston, have changed the method of driving and construction of the cushion under the needle bar, according to a recent announcement. A V-belt drive from the 20 in. card-cylinder pulley to the combination binder pulley now replaces the former drive. To make it possible for mills to change over cards already installed, Saco-Lowell has built a small unit which can be used to groove the card-cylinder pulleys for the V-belts, without removing the pulleys.

The second change has substituted a thick felt for the leather formerly used to provide a cushion for the needles of the stripper. Use of felt instead of leather, and a new method of applying the cushion, are said to result in increased resiliency and hence longer needle life. This change, like the first mentioned, can be made on cards already in place.

A revision has also been made of the design of the guide plate on Model 37 lap winders. The new plate is designed to eliminate trouble, such as



Constant-tension drive for Duo-Dyeing Machine (G.E.)

slivers dropping down between the rolls after piecing, which was encountered on earlier models in which there was less support of the slivers. At the same time, the new guide plate effects a more accurate selvage control, the manufacturers state. It can be fitted without any changes in construction of the machine, and is quickly and easily removable when cleaning is necessary.

Constant-tension Drive for Dyeing Machine

A constant-tension drive designed for use with the Duo-Dyeing machine developed by Duo-Dyeing Machine Co. Charlotte, N. C., has been announced by General Electric Co., Schenectady, N. Y. The drive has been designed to prevent defective dyeing caused by variations in cloth tension. It is fully automatic, enabling an operative to divide his attention among several machines.

This drive is planned to propel the cloth at a constant speed, by means of two nip rolls driven by a constant-speed gear-motor. Winding and unwinding are accomplished by means of wound-rotor induction motors, one direct-connected to each of two winding rolls. During winding, the motor torque increases and the speed of the roll decreases as the roll diameter increases. To provide uniform tension of any desired degree, the rate at which the torque increases is controlled automatically to suit the diameter change.

Automatic timing co-ordinates the application of winding torque, starting of the cloth, and application of torque on the unwinding roll. The sequence of removing winding torque, propelling the cloth, and braking on the unwinding roll is timed, when stopping, by another automatic timing device.

Useful Accessories for Textile Mills

Industrial multi-breakers for use on 230-volt, a. c. systems have been announced by Square D Co., Detroit, Mich. Both 2- and 3-pole forms are available in capacities from 15 to 100 amp. The operating mechanisms are mounted on the cover of the box so that when the cover is removed, the entire interior of the box around the breaker is left free for wiring. Indication of tripped condition is by means of a white target signal.

A sponge rubber form of Ameripol synthetic rubber has recently been announced by B. F. Goodrich Co., Akron. Features cited are its extraordinary resistance to oils, greases, and many other solvents.

A line of V sheaves and pulleys is being offered by Thermoid Co., Trenton, N. J. This is said to round out the company's line of multiple and fractional horsepower V-belts, so that they can engineer drives from ¼ hp. to 1,000 hp.

Air circuit-breakers for repetitive duty have been announced by Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. Designated type DK the breakers are available in 15,000 and 25,000 amp. interrupting capacities in current ratings from 15 to 600 amp., for operation on one, two, three, or four-pole, 600 volts a.c., or 250 volts d.c. circuits.

An improved starting device for 40-watt fluorescent lamps, which includes a stopper element designed promptly to shut off the starter element when a lamp reaches the end of its normal life, was announced recently by General Electric Co., Nela Park, Cleveland, Ohio. The device is intended to permit more efficient and economical group replacement, without bothersome flickering of inoperative tubes between service periods, as well as to protect starters from unnecessary wear.

New Printing Process

Direct, acid, alizarine, and other soluble dyes are employed in conjunction with an organic medium in a new printing process announced by Aridye Corp., Fair Lawn, N. J. The process, known as the Aquadye method, is an outgrowth of the original Aridye process described in the May, 1938, issue of TEXTILE WORLD. The new method is said to give the same sharpness of prints, levelness, fine total gradations, and good detail of the Aridye process and to permit production of deep-shade blotches not recommended for production with pigment colors. As Aquadye and Aridye formulations are compatible, the two media can be used in combination. The process is being employed for machine and screen printing cotton and rayon.

Aquadye pastes are described as solutions of synthetic binders bodied to printing consistency by emulsification with water in which the dyes are dissolved. The formulations can be varied for different classes of dyes.

The new method is said to reduce preparatory work and aftertreatment to a minimum; for example, flannelette can be printed without renapping. It is stated also that tinted grounds which will not stand washing can be overprinted by the Aquadye method. No washing is required after printing, unless it is necessary to develop the color. Where goods are washed, the tendency of the dye to stain the ground is reduced.

Another advantage cited for the Aquadye process is that the colors readily wash out of engravings, color boxes, tubs, and screens when a stream of water is applied.

New Dyes and Chemicals

Rayon Yarn Lubricants; Fugitive Tints for Rayon

Three new products developed recently by United States Testing Co., Inc., Hoboken, N. J., are a special oil for conditioning rayon knitting yarns, a new line of oil-soluble fugitive tints for identifying rayon, and a combination conditioning oil and tint. Use of the conditioning oil or the combination oil and tint is particularly recommended for high-twist yarns. The lubricants can be applied on the knitting machine by means of a slowly revolving roller placed approximately in the position of the moistening trough used when knitting silk hosiery or by means of a wick which is dropped over the floating rod normally used in the moistening trough. Use of the lubricant is said to result in a better stitch and fewer press-offs.

The fugitive tints, known as Cumol tints, are available in eight colors. They are designed primarily for addition to oils used in preparing rayon hosiery yarns.

The combination conditioning oil and tint, known as Vacol, is also available in eight colors. It provides a means for lubricating the yarn and tinting it for identification at the same time. The manufacturer states that Vacol can be employed on cotton, as well as on viscose, cuprammonium, or acetate rayon.

General Dyes

General Dyestuff Corp. announces the following new products:

Algol Printing Scarlet GRN Paste, a vat dye especially adapted for printing; it is in the form of a smooth, grit-free, non-settling paste, which produces bright shades of scarlet possessing very good fastness to light, washing, and chlorine.

Acid Alizarine Garnet RA, a homogeneous chrome color producing bluish red shades on various forms of wool; it can be applied by either the afterchrome or chrome mordant method and produces dyeings of good to very good fastness to light, and very good fastness to washing, fulling, water, sea water, and perspiration.

New Publications

Causes and Effects of Fatigue

FATIGUE OF WORKERS; National Research Council; Reinhold Publishing Corp., 330 W. 42nd St., New York; $2.50.

Most industrialists, including textile, have given too little attention to study of factors causing fatigue of workers and the effects of fatigue on production and efficiency. This book is an attempt to throw more light on the subject. It consists of a series of reports of meetings held by the Committee on work in industry of the National Research Council.

Beside an introductory chapter, reports are included on the effects of heat and high altitude, some industrial causes of illness, methods of interviewing, self-expression and labor unions, extra-time allowances, a study of industrial organization, and other topics.

Considerable interesting and often enlightening information is contained in the volume. It is regrettable that most of the data are offered in the form of "minutes" of meetings of the committee, which results in lack of organization of the findings, of putting first things first. In all probability the method of presentation will also reduce the number of the book's readers somewhat below that warranted by the importance of the topic. An article on fatigue as applied to textile mills appeared on pages 52, 53 and 54 of the August, 1941 TEXTILE WORLD.

A New Type Novel About Cotton and Cropping

BOOT-HEEL DOCTOR, by Fannie Cook; Dodd, Mead & Co., New York; $2.50.

A combination of share-cropper poverty, flood disaster, and Red Cross relief makes this novel of the little Southeast cotton corner of Missouri an interesting one. It is different from the average tenant-farm story, since the croppers and their ills are only the backdrop for two dominant characters: Dr. Joel, who delivered their babies, set their broken bones, and doctored their souls; and a negro preacher, Reuben, who became their Moses.

The author tells her story simply and well. She makes good use of the Mississippi's rampage and of local feuds, and graphically describes the Exodus — something we vaguely remember pictured in *Life* as a tenant farmer's strike. Miss Cook dramatizes the Exodus as the only way the inarticulate croppers could focus national attention on their plight. It's too bad she did not carry her story further, for we can't help wondering what happened to those poor souls who were led to camp on Highway 61 by an inspired negro, their preacher-organizer.

It's good reading, and because it is a new type story of cotton and cropping it should be interesting to those who through buying cotton are buying a share-cropped commodity.

Data on Cotton

AMERICAN COTTON HANDBOOK, G. R. Merrill, A. R. Macormac, H. R. Mauersberger; American Cotton Handbook Co., 303 Fifth Ave., New York; $4.80.

This book contains chapters on the historical background of the American cotton industry, economic and statistical background of cotton growing and manufacturing, merchandising new cotton products, cotton cultivation and ginning, manufacturing cotton yarns and fabrics, weaves and designing, gray-goods constructions, finishing, testing, laundering cotton materials, bibliography, and glossary. Several chapters on specialized phases were contributed by authors other than those listed above. As a reference book on cotton and the cotton industry, this work should be useful to students and others who wish to acquire a general knowledge of the industry as a whole or some particular phase of it. It does not attempt to give any large amount of detailed, technical information on the various cotton manufacturing and finishing operations.

75% O. K.

FIRE IN THE SKY, by Tarleton Collier, Houghton Mifflin Co.,; $2.50.

One of the real fallacies of modern literature is that no novel of the South will sell unless it drags in the po'-white, tenant cotton farmer theme. For instance, Tarleton Collier is a perfectly able author, and he had a good story to tell about a girl, uneducated, who worked her way up in the business world by successfully doing the various jobs provided by the hotel business. But he wasted at least one fourth of his readers' time by a re-hash of all the dirt and agony that tenant-farm poverty may spell, before he got into his story. Once he entered his real medium, Atlanta and the hotel game, he swung right along in a gripping and

dramatic way. His heroine's tenant-farm background added no strength or interest to her; she could as easily and much more probably have been a creation of Atlanta's slum district, or perhaps one of the poorer cotton mill sections of the early century. When she was finally launched on her accidental career as hotel clerk, in which over two decades she worked up from a six dollar a week job to seventy-five dollars a month, the entire first quarter of the novel, complete with characters, disappears, having no further connection with the story.

Collier is a good writer, and when he learns the art of staying on the track he will probably be a successful one. At any rate, this novel, his first, will be of interest to Georgians who know him and who know the locale of "Fire in the Sky."

News of Suppliers

Crompton & Knowles Loom Works, Worcester, Mass., for the second successive year, have received a bronze plaque from National Advertisers Association for "outstanding advertising accomplishments."

Amos Miller Bowen, president and treasurer of U. S. Ring Traveler Co., Providence, R. I., last month celebrated his 50th anniversary in the ring traveler business. Mr. Bowen joined the American Ring Traveler Co. in 1891 at the age of 17. This firm later merged with the National Ring Traveler Co., and, in 1909, Mr. Bowen formed the U. S. Ring Traveler Co., of which he has been treasurer ever since. Mr. Bowen started with five employees and now employs 60 skilled workmen. Since 1911 the company has been at 159 Aborn St., Providence, but has expanded with acquisition of adjoining property and erection of new buildings. It is now running overtime in the cutting room and three shifts in the hardening room to take care of work for the Defense Program. Mr. Bowen is one of a family of 10 children, all living. A younger brother is Rear Admiral H. G. Bowen, U. S. N., head of the Naval Laboratory, Washington, and now in charge of the Federal Shipbuilding & Drydock Co., Kearney, N. J. Amos Bowen has taken constant interest in civic affairs in Providence and is a member of numerous organizations in that field. At the half century mark in business, he looks forward to many good years to come.

AMOS MILLER BOWEN, president and treasurer of U. S. Ring Traveler Co., who last month celebrated his 50th year in the ring traveler business

Beach Soap Co., Lawrence, Mass.—A controlling interest in this firm has been acquired from the Cowles Detergent Co., Cleveland, Ohio, by Gordon R. Fulton. Mr. Fulton has lately been sales manager of Beach, and been with the company for 10 years, going there from Lever Bros. Policies and qualities as in the past will be continued under Mr. Fulton's direction. Cowles Detergent Co. will continue to be represented in New England by its Mitchell Wing Division at Cambridge, Mass.

Union Special Machine Co. has recently opened new and larger quarters for its St. Louis office at 1700 Olive Street. The office continues under the direction of Elmer E. Gratsch, manager, and William G. Booth, assistant manager. The St. Louis office is the main office of the branch that includes the Dallas and Ft. Worth, Texas, and Kansas City, Mo., offices.

Whitinsville (Mass.) Spinning Ring Co. has awarded contract to Swanson-Janson Co., Worcester, Mass., for a plant addition from plans by Frank H. Cutting, Worcester.

E. I. du Pont de Nemours & Co. have acquired a 23-acre site at Wyandotte, Mich., to erect a plant for manufacture of chlorinated hydro-carbon solvents. The plant will be a unit of the R. & H. Chemicals Department of the company, and will be ready in the summer of 1942.

Standard Factors Corp., New York, has acquired the name, good will, and servicing of clients of Plymouth Factors Corp., New York. T. H. Silbert is executive vice-president of Standard Factors. The combined credit operations will be under the management of Edmund Wright. Jesse S. Harte, president of Plymouth Factors, will not be associated with the merged organization but will continue to operate the Intermediate Factors Corp., of which he is also president.

DEFENSE PLACARD FOR TRUCKS: George W. Malcomson, assistant sales manager, Truck Division, Dodge Brothers Corp., presents to James B. Godfrey, Jr., (right) president, Great Central Transport Corp., Detroit, the first placard designed to distinguish motor trucks in civilian use that are serving the nation by hauling defense materials.

Colgate-Palmolive-Peet Co., Jersey City, N. J., has elected John K. Colgate as a director of the company. Mr. Colgate is the son of Russell Colgate, who, until his death three months ago, was a member of the board. He is also

GEORGE M. PORGES, who recently organized the George M. Porges Associates, New York, as reported in a previous issue, to specialize on creative lithography for the textile industry particularly box wraps and all packaging accessories.

"Actively Engaged" on the Industrial Front

Not all engagements are conducted on the field of maneuvers, the battlefield, or the high seas.

In fact more men are engaged on the industrial fronts.

Back of our tremendous emergency production in textiles, a vast army of suppliers is actively engaged.

Toward the steady and increasing flow of vital textile paper carriers SONOCO is marshalling all its resources, and directing its supreme energies.

To put it mildly, we too, are "actively engaged."

sonoco
SERVES THE WORLD
PAPER CARRIERS

SONOCO MAKES *EVERYTHING* IN *PAPER CARRIERS*

SONOCO PRODUCTS COMPANY

BRANTFORD ONT. | HARTSVILLE S. C. | MYSTIC CONN.

DEPENDABLE SOURCE OF SUPPLY

a great-grandson of William Colgate, founder of Colgate & Co. in 1806, the oldest of the three companies which, through mergers in 1927 and 1928, became the Colgate-Palmolive-Peet Co. John K. Colgate is secretary, treasurer and a director of Van Strum & Towne, Inc., investment counsel, New York.

Bowen-Hunter Bobbin Co., East Corinth, Vt., was damaged by fire Oct. 17. The company's orders were 70% national defense. A large quantity of wooden bobbins ready for shipment to cotton mills working on defense orders were destroyed. Damage is estimated at about $75,000.

International Business Machines Corp., Endicott, N. Y., has added new defense factory training courses at its employees' educational center. The program of factory education, originated nine years ago by Thomas J. Watson, president of the company, provides all IBM employees with an opportunity to acquire an education, offering classes for both day and night shifts.

General Electric Co., Schenectady, N. Y., reports orders received in the first nine months of 1941 at record total of $831,390,000 compared with $397,810,000 for the same period in 1940, an increase of 109%. Orders definitely known to cover equipment for national defense purposes amounted to approximately $412,000,000 in the first nine months of 1941.

Warwick Chemical Co., West Warwick, R. I., has appointed Walter E. Murray as its textile sales manager. Mr. Murray will make his headquarters at the main offices in West Warwick, R. I., but the nature of his duties will permit him to continue his contacts in the field. His years of experience in the textile industry includes executive duties with U. S. Finishing Co., Lincoln Bleachery, Eddystone Finishing Co., and Pacific Mills.

WALTER E. MURRAY, now textile sales manager of Warwick Chemical Co.

J. E. MOE, recently appointed production manager of Jacobs Rubber Products, Inc.

Jacobs Rubber Products, Inc., Danielson, Conn., recently organized as a subsidiary by E. H. Jacobs Mfg. Co., has appointed J. E. Moe as vice-president and production manager. Mr. Moe is a native of Philadelphia, and a University of Denver graduate mechanical engineer with 12 years' experience as research developmental and manufacturing engineer in the rubber field. He has specialized in the development of many vulcanized rubber canvas products for the textile and other major industries. All manufacturing will be done at a new plant in Danielson, Conn., already constructed. Sales will be handled by the parent company.

Allis-Chalmers Mfg. Co., Milwaukee, Wis., has elected Walter E. Hawkinson, treasurer of the company since 1936, to the joint position of secretary-treasurer. He assumes the secretarial duties of Wm. A. Thompson, company vice-president and secretary, who resigned.

Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., has been enabled to make an immediate 100% increase in its output of lighting equipment urgently needed for the nation's air defense and factory production-lines, by completion of three new buildings at the Westinghouse Lighting Division in Cleveland, Ohio.

Hazel Randall has opened offices at 501 Fifth Ave., New York, for her new organization which will feature promotion and styling for lingerie and hosiery companies, as well as for fabrics and allied lines. Miss Randall was formerly merchandise manager for the manufacturing division of Marshall Field & Co., buyer of hosiery for Bonwit Teller and Stewart & Co. More recently, she was educational director of the International Silk Guild.

Wickwire Spencer Steel Co. and its subsidiary, American Wire Fabrics Corp., New York, have appointed George L. Randall as advertising manager succeeding K. A. Zollner, resigned.

Hygrade Sylvania Corp., New York, has named Paul S. Ellison as director of advertising and sales promotion. He has been with the concern for 10 years.

Link-Belt Co. has appointed William Alex. Craig as purchasing agent of the company's Philadelphia plant, to succeed James C. Lenahan, who died recently. Mr. Craig has been with Link-Belt since 1916 and was Mr. Lenahan's assistant for many years.

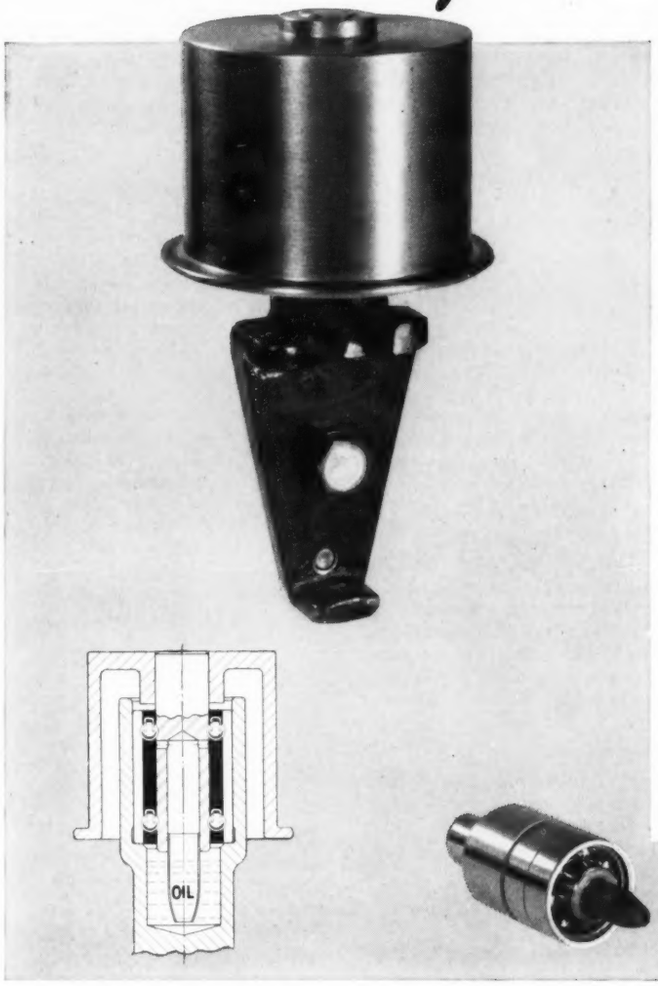
Acme Steel Co., Chicago, Ill., for its house organ *Acme News*, was awarded a Certificate of Excellence given annually to outstanding employee publications by the National Safety Council. Announcement of the award was made at the 30th National Safety Congress & Exposition held in Chicago Oct. 6 to 10. Besides the usual material concerning groups and individuals, personal items and news of employee activities, *Acme News* interestingly presents how and where Acme products are used.

Cochrane Corp., Philadelphia, Pa., has appointed W. B. Simons, Charlotte, N. C., as representative for Cochrane flow meters in the Carolinas. Mr. Simons also handles the products of Hays Corp., Spence Engineering, Cuno Engineering, Williams Gauge, and Henszey Co.

Bailey Meter Co., Cleveland, Ohio, has appointed R. M. Cundiff as manager of its Cincinnati branch office at 2512 Carew Tower Building. He succeeds E. R. Dearborn, resigned. Mr. Cundiff for the last twelve years has been located in the company's New York branch office devoting his efforts to application of metering and control equipment to steam power plants and industrial processes.

R. M. CUNDIFF, appointed manager of Cincinnati branch of Bailey Meter Co.

inside it's always *raining*



● Yes, a continuous shower of tiny drops of oil inside this Tension Pulley Ball Bearing keeps balls and raceways automatically lubricated. It is the *first* anti-friction bearing with its own oil-circulating system—a permanent built-in feature, enabling it to run for a year or more without attention.

Since the products of New Departure are *ideas* as well as ball bearings, this company has developed many "famous firsts," has revolutionized mechanical design in many industries.

Nothing rolls like a ball. Ball bearings are used wherever shafts turn. Ask for your copy of that absorbing, superbly illustrated treatise: "Why Anti-Friction Bearings." New Departure, a division of General Motors, Bristol, Connecticut. Chicago and Detroit.

New Departure

. . THE FORGED STEEL BEARING

FREE FOR THE ASKING

Readers interested in literature reviewed on this page may secure copies by writing to Textile World, 330 West 42nd St., New York, giving their company connection, title of item desired, and date of issue in which it was reviewed.

Winding machines of several types, including back winders, bobbin winders, and single- and double-end skein reelers, are described in bulletins offered by Fidelity Machine Co.

Electrical distribution systems for use in industrial plants and power stations are the subject of a 77-page illustrated book giving data on types available, characteristics, and specifications; distributed by Westinghouse Electric & Mfg. Co.

Manufacture of card clothing and the factors which go to make up a good clothing are discussed in a folder titled "How Wissco Card Clothing Is Made;" prepared by Wickwire Spencer Steel Co.

Industrial possibilities in cities located along the Chesapeake & Ohio R. R., are the subject of a bulletin issued by Industrial Development Service, Chesapeake & Ohio Lines.

Rayon warp sizing advantages obtainable with its equipment are the subjects of articles in the September issue of *Rayon Warp Sizing Specialist*, published by Charles B. Johnson Machine Works.

Cleaning data manual gives formulas for removing grease, dirt, lint, oil, and rust from textile-machine parts prior to electroplating and other reconditioning work; offered by Oakite Products, Inc.

Chart catalog designated No. 1230 contains illustrations and descriptions of a wide variety of charts available for use with instruments produced by C. J. Tagliabue Mfg. Co.

Automatic looms, and their abilities and advantages over former types, are discussed in the October issue of *Cotton Chats*, published by Draper Corp.

Casters and wheels for a wide variety of services are catalogued in a 192-page data and reference book being distributed by Darnell Corp., Ltd.

Drives and sheaves are the subjects of two catalogs describing Texrope products; Bulletin B-6051-B covers drives and Bulletin B-6047 is devoted to sheaves; both offered by Allis-Chalmers Mfg. Co.

"Cotton as a Silk Substitute" is the subject of the lead article in the October issue of the *Needle's Eye*; another article gives brief factual information on defense production problems involving sewing; offered by Union Special Machine Co.

Lift trucks of gasoline-powered type, in capacities from 2,000 to 10,000 lb. are described, pictured, and their advantages listed in a 26-page booklet prepared by Towmotor Co.

Production of sheets and pillow cases from raw material to finished products by Cannon mills is the subject of a word and picture story in the October issue of *Esso Oilways*; published by Standard Oil Co.

Drills, reamers, interchangeable punches, etc., are described in 166-page catalog No. 97, which includes data on design, construction, use, and care; prepared by Whitman & Barnes.

How repair heddles prevent shut downs in production, and the importance and value of hard chrome treatment of textile equipment parts which contact yarn, are the topics of two illustrative folders offered by Steel Heddle Mfg. Co.

Unit heaters of vertical-flow, propeller type, with air diffusers, are described in a catalog which also contains specification data; distributed by Young Radiator Co.

Use of interlock knitting machines for production of sportswear fabrics for all seasons is discussed in two recent leaflets prepared by Wildman Mfg. Co.

Northern hard maple for industrial floors is the subject of a photographic folder, which also gives information on heavy-duty finishes for both old and new floors; prepared by Maple Flooring Manufacturers Association.

Instruments and controls for measuring and controlling moisture content, size cooking, bleaching, mercerizing, dyeing, and other textile processes are described in catalog No. 9304 prepared by Brown Instrument Co.

A washable protective covering for flat wall paint, designed to provide easy cleaning of painted walls, is described in a 6-page folder issued by Bergonize Co.

Preference ratings to manufacturers of maintenance and repair parts for textile machinery, and the importance of modern accessories and supplies in aiding defense production, are topics of articles in the Sept. issue of *Davis & Furber News*; issued by Davis & Furber Machine Co.

A mechanical swing-guider and opener for application to various machines handling cloth at full width is the subject of a 4-page illustrated folder prepared by Mt. Hope Machinery Co.

Fire losses and methods of preventing fires are the topics of issue No. 23 of *Firefax*, prepared by Pyrene Mfg. Co.

Finishing specialities for textiles and how these products aid finishers are described in a circular offered by Ernst Bischoff Co.

Chain hoists in capacities from ½ to 4 tons are described in bulletin Y-C 1, which gives complete information, specifications, prices, etc.; prepared by Coffing Hoist Co.

Nylon brushes for use on textile machines, fireproof cotton for home insulation, and use of rayon threads in U. S. paper currency, are three items included in the September issue of *The Pioneer*, published by Niagara Alkali Co.

The importance of velocity of air to proper cleaning of creels, back and front guides, and under roll stands is discussed in the August issue of *The Swirling Column*; another item tells of unique new uses for cotton; published by American Monorail Co.

Year-round humidification of woolen-mill card rooms is the subject of an illustrated article describing installations of humidifiers produced by Armstrong Machine Works.

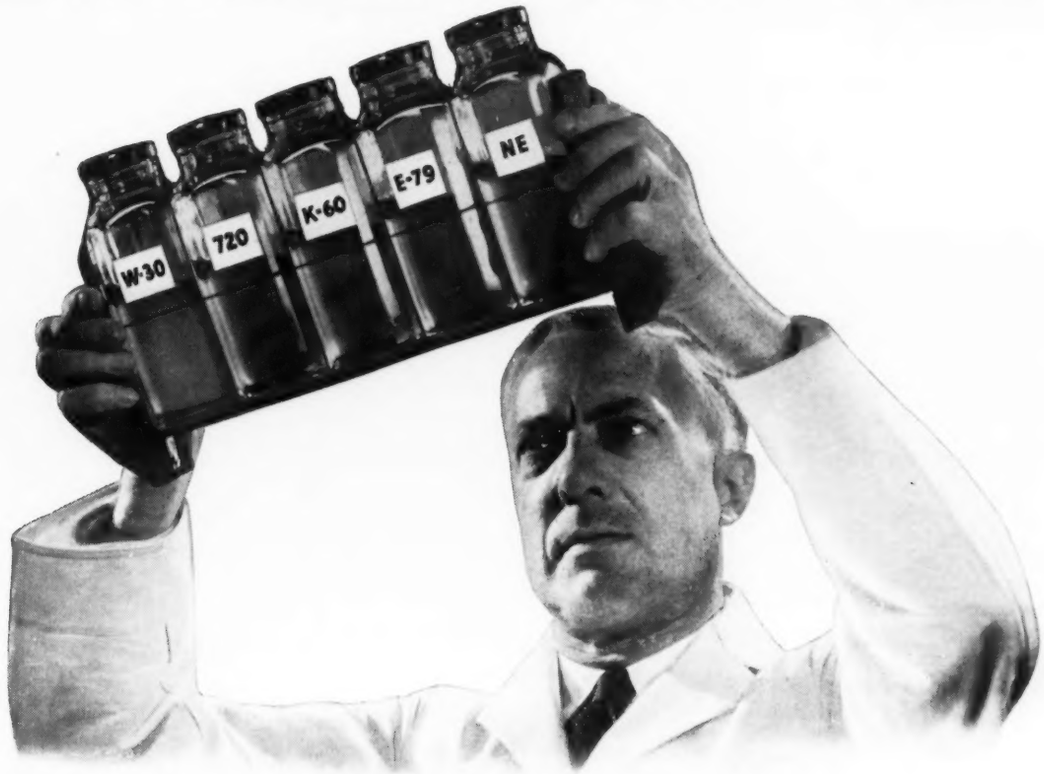
Fatigue of metals is the subject of a 45-page booklet planned to present information useful to designing engineers; prepared by Nitralloy Corp.

Magnetic clutches and clutch and brake combinations, are described in Bulletin 225-A which contains engineering data on application of these devices; issued by Stearns Magnetic Mfg. Co.

Air-cooled transformers, 150 to 2,000 kva., are described in a new 10-page booklet; included are answers to questions on advantages, safety features, design, maintenance, applications, etc.; prepared by Westinghouse Electric & Mfg. Co.

Variable-speed transmission equipment of the P. I. V. gear type is covered in a catalog and data book designated No. 1874 and giving information on capacities, speed ratios, dimensions, weights, and other factors; included are numerous installation photos; distributed by Link-Belt Co.

FIVE ENTIRELY DIFFERENT AGENTS TO SOLVE YOUR WETTING, DISPERSING AND SCOURING PROBLEMS



BECAUSE every TRITON is a chemically distinct product, the TRITONS offer *five different approaches* to countless wetting, dispersing, and scouring problems. These products represent anion active, cation active, non-ionic, acid compatible, alkali compatible, oil soluble, and water soluble materials.

Textile chemists appreciate the distinctive features of the TRITONS described below and evaluate each separately.

TRITON W-30 (anion active) Used as a penetrant and leveler in dyeing of vat colors . . . assists penetration of DEGOMMA in desizing, and of RHOPLEX and RHONITE resins in finishing.

TRITON 720 (anion active) Used as soap substitute . . . disperses dyestuffs to give more level dyeing.

TRITON K-60 (cation active) Used as a powerful softening agent for fabrics . . . acts as a mordant for certain dyestuffs and resin emulsions.

TRITON E-79 (anion active) Used as a wetting agent in many textile processes and a wetting back agent in sanforizing. Employed in scouring and degreasing operations where an oil and water soluble emulsifying agent is required.

TRITON NE (non-ionic) Used as a wetting and dispersing agent in sizing, desizing, finishing, bleaching, stripping, and water-proofing.

THE TRITONS

RÖHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA, PA.

Manufacturers of Leather and Textile Specialties and Finishes . . Enzymes . . Crystal-Clear Acrylic Plastics . . Synthetic Insecticides . . Fungicides . . and other Industrial Chemicals

THIS IS NO. 30 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

PROPER CARE PREVENTS UNEXPECTED SHUTDOWN

Many textile mills are now operating three shifts. Most mills are operating under pressure. All over the country, textile machinery is being taxed to the utmost to produce goods.

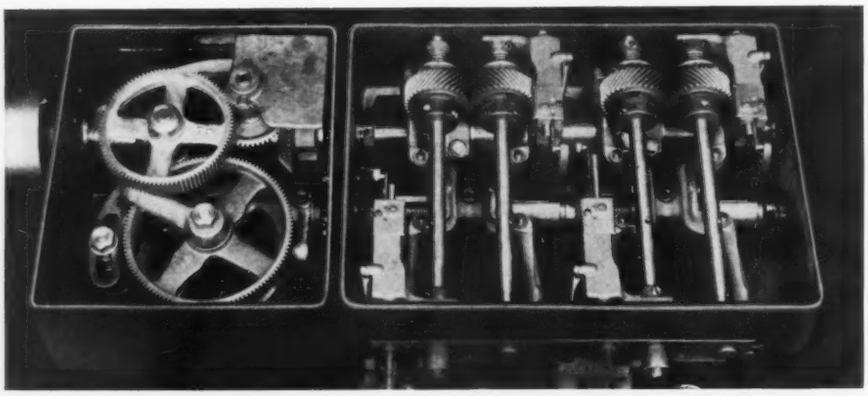
A byproduct of this high-pressure production will be extreme wear and tear on all moving parts — sudden needs for repair and replacement. Repair undoubtedly can be made in many cases — but replacement of machine parts will be problematical. The priority situation — availability of metal — promptness of delivery — cannot be predicted.

The only logical method of avoiding this predicament is to give machinery proper care — and to check it frequently to find trouble sources before they reach the critical point.

Machinery manufactured by Universal Winding Company contains materials that were carefully selected. Construction is rugged. Certain parts are precision-built to very close limits. All parts are rigidly inspected. But, like any machinery, these winders must be cared for properly and inspected frequently.

On big installations, a maintenance crew can be assigned to a regular overhaul cycle. A few machines at a time are taken down, thoroughly cleaned, inspected for wear, lined, leveled and supplied with fresh oil. These winders can be depended upon for continuous production. On smaller installations, complete overhaul of each winder once every six months will insure against the inconveniences of unexpected shutdown.

Under present conditions, there may be a tendency, resulting from the desire to make every minute count, to neglect proper maintenance. Yet it will be far better to spend a few hours now thoroughly overhauling your winders to put them in first-class condition than to have trouble later on when you may be working at peak production.



No. 90 Gainer Case. Sludge and lint collecting here necessitate cleaning out regularly. Oil holes and oil return holes must be kept open and free from waste. Gears and spindles should be removed in order to do this job thoroughly.

Cleaning

While the parts of a precision-built machine are connected, it is difficult to detect evidence of wear, but the overhaul period will permit testing or close visual examination of each piece.

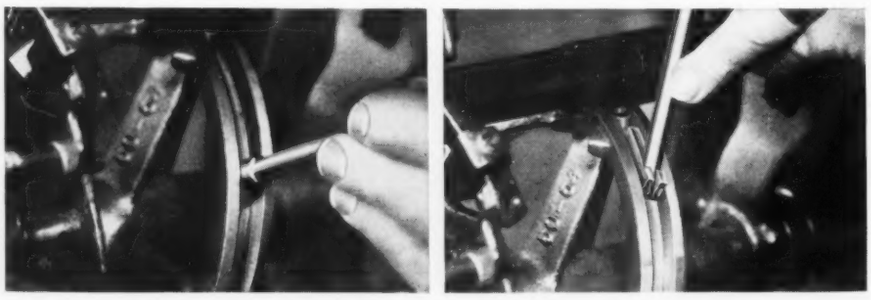
With the machine stripped, oil in the cases is removed by an oil gun, filtered or renewed, and the inside of the case wiped clean with rags to remove sticky sludge accumulation.

Oil holes and bearings should be cleaned very frequently. If lint is allowed to clog up oil holes or connecting grooves, it will act as a wick robbing the bearings of adequate lubrication and causing wear. Waste collecting in oil return holes will cause oil leaks by preventing proper return of surplus oil to the reservoir.

Tiny metal particles collecting in grease will act as an abrasive that will gradually cause moving parts to wear unless removed during the semi-annual cleaning. Moisture that may collect under grease will corrode metal if allowed to remain over long periods.

Lining and Leveling

Winders are properly lined and leveled when installed, but due to sagging floors and vibration, they will often lose their alignment. In the case of long-length or heavy machines, a twisting shaft will loosen couplings or exert pressure that will wear out bearings. Machines that are not level will interfere with proper distribution of oil. Periodic realignment will reduce friction, save power consumption and increase speed.



Home-made gauges. Left: *if the tool fits in the groove, wear is excessive and the cam should be replaced.* Right: *if the feeler gauge can be slipped between cam roll and wall of the groove, the cam roll is worn and should be replaced.*

See our Catalog in TEXTILE YEARBOOK

"THERE'S A UNIVERSAL WINDER FOR EVERY TEXTILE NEED"

UNIVERSAL WINDING COMPANY

PROVIDENCE BOSTON PHILADELPHIA UTICA CHARLOTTE ATLANTA

*Reg. U. S. Pat. Off.

THE OVERSEERS' CORNER

FAMILY ARGUMENTS IN THE MILL

A PETE & BILL DISCUSSION

True to character, Bill looked glum, and he didn't acknowledge Pete's cheerful greeting with as much as a nod.

"Are you really mad, or just practicing?" inquired Pete interestedly as he laid some papers on the desk in front of Bill. "Here are some orders the super asked me to give to you."

"You always know so much, young fella—I'm going to ask you something," said Bill, turning around. "Do you think it's a good policy to have two or more members of the same family working in one department?"

"Why sure I do," replied Pete, "and I'll tell you why. When these are . . ."

"Now wait a minute," broke in Bill hurriedly. "I think you're wrong, and here's why. They start arguments at home and bring them into the mill. The whole department suffers, not just because two people are losing production, but because the others seem to take sides, too. Right now there are two sisters carrying on a feud in my room, and I'm trying to decide which one to fire."

"Hold on!" said Pete. "Have you thought about trying a little peacemaking? My experience is that I get better workers when several members of a family work in my department, and it's worth it even if things like this do come up occasionally. They have

"Are you really mad, or just practicing?"

a more unified feeling and have more interests in common. Also . . ."

"There you go," broke in Bill for the second time. "You're talking like a Sunday School teacher again. But just to show you it doesn't work, I'll tell you a story. I once had a man and his wife in my department and the man was a foreman. He showed so much partiality to his wife that everyone else got sore."

"Sure, I know things like that happen sometimes," said Pete. "I'm talking general policy. Here is my biggest argument: the family is one of the best training schools there is for workers. If a daughter comes to work in her mother's department, the mother will teach her all she knows, and similarly with sons, fathers, brothers, and sisters. All you have to do is learn to keep them at peace when they are working."

"That's more than you or anybody else can do," growled Bill.

Should two or more members of a family work in the same department?

Letters from Readers

One Problem Solved

"When the Faithful Employee Gets Too Old" Pete & Bill, September, 1941

Editor, Overseers' Corner:

It might interest Pete and Bill to know that at least one textile mill has solved its "faithful old employee" problem.

For many years, the Dominion Textile Co. Ltd. of Canada has had a pension fund for old employees. Employees who have worked a certain number of years for the company and have reached the age of 65, or who have worked 35 years for the company, regardless of age, are eligible.

The amount paid is a percentage based upon the last ten years' earnings, and is sufficient to maintain an aged man or woman.

In certain cases, employees not eligible by age or years of service but who are incapable of carrying on due to illness or disability, can obtain pensions.

Now Pete can go fishing with Bill and forget one of his thousand problems.

HENRY K. TORPEY
(Quebec City, P. Q., Canada)

There Are Ways to Take Care of the Old

Editor, Overseers' Corner:

When a man works the best years of his life for a company, helping it to make money, and also helping himself to raise a family so that his boys and girls may also work for the same company; and when his sons and daughters marry and go to live by themselves and leave him and his wife to live on his small weekly earnings, one of the most cruel things any employer can do is to lay that man off.

I think that a man who has worked

CONTRIBUTIONS to the letters and practical helps in "The Overseers' Corner" are paid for when published without regard to length. We use letters (not over 200 words) discussing the material on this page or any other pertinent matter whether of mechanical, managerial or just plain human interest. Those who contribute practical helps or kinks which are published (not over 500 words) will be paid additional for an appropriate sketch to illustrate their device. It is not necessary to submit finished drawings. Contributions of greater than specified length may be given consideration as articles. If these pages interest you —contribute something to them to interest others. Address Editor, Overseers' Corner, Textile World, 330 West 42nd St., New York.

for a company for a great many years, and has begun to slow up so he cannot run his regular job like younger people, should be given a somewhat easier job, then as he grows older, still an easier job. When he can no longer work, a small pension of some kind should be given him by his company so he can live without having to stay with his children (which I don't believe any mother or father wants to do permanently) or having to go on relief, which would rob him of his pride and self-respect in his old age.

Thank goodness I have an employer who believes in taking care of his employees in their old age.

F. F. LAWING
(*Mount Holly, N. C.*)

Can Pete Still Fix

"Overseers Working on Machinery"
Pete and Bill, August, 1941

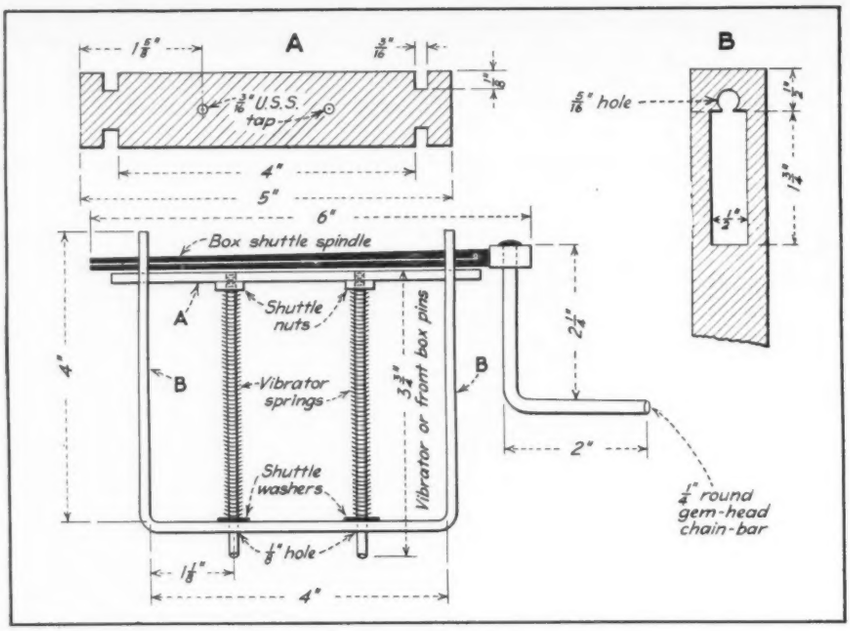
Editor, Overseers' Corner:

Pete may be right about not being worried about his job. He may not keep abreast of the various settings, etc., and use his brains only for supervision, but if I am right or anywhere near it, I think that an occasional review of these things is worthwhile.

I once took a second hand's job in a mill where the machinery was English, and all my experience had been on American. I was groping for advice, studying the mechanism, and other things, and once when I thought myself about stuck I asked the overseer to clear up a couple of items by a little explanation—I having told him when he hired me that I knew nothing whatever about the English builder. He flouted off with the remark, "Am I supposed to be your teacher on this job?" I wonder if Pete is so bound up in his 20% of active duty that he thinks that he can't be a teacher anymore? And too, a checkup on some of his fixers by an occasional examination of their settings, tightening of belts, set screws, and so on, would greatly reduce the danger of expensive breakdowns.

The fact that some overseers or second hands are afraid of working more than 20% of the time might be the reason why they are getting to where they aren't worth a dime.

LAMAR FOGEL (*South Carolina*)



Easily made bumper winder

Overseers' Practical Helps

Handling Employees Who Make Mistakes

Here is a "kink" that is not of a mechanical nature, but one which will save operating executives in textile mills lots of time, trouble, and money. A successful mill manager once said to me that it is foolish to discharge an employee for one mistake, however serious the error might be. He remarked that the next man, probably, would make the same mistake, unless he was warned. "Correct the employee who makes a mistake," this manager said, "and he is not likely to repeat the same error."

T.T.O. (*Georgia*)

Bumper Winder

For winding tight rolls of cloth to be inserted into oval loops of leather for use as picker-stick bumpers on woolen and worsted looms, the bumper winder pictured in the accompanying sketch has proved handy. Parts needed to make a bumper winder are:

Two pieces of 3/16 in. round steel 3¾ in. long; vibrator or front-box pins can be used. Cut 3/16 in. standard thread 3/8 in. long on one end of each.

One vibrator spring from a Gem head, cut into two pieces 3½ in. long.

Two shuttle nuts and washers.

One 6 in. long spindle from a box-loom shuttle.

One piece of ¼ in. round steel 4¼ in. long; Gem head chain bar can be used.

⅛ in. x 1 in. flat iron, to be used for pressure-plate *A* and frame *B*. *A* and *B* are cut, shaped, and drilled according to diagram.

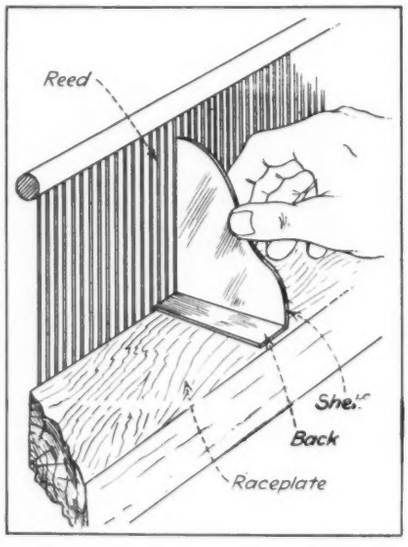
To assemble the bumper winder, put pressure-plate *A* in frame *B* then proceed with putting in pins and springs.

G.E.H. (*Pennsylvania*)

Square for Close Quarters

A square made from the shelf and part of a box-back of a loom is very handy for squaring off the reed, in checking to make sure the raceplate is square to the reed, and in other places where there is not enough space to get a regular square. I simply cut off the wanted part of the box-back and shelf with a hacksaw, then trued it up with a square. It is very useful around a loom, or anywhere where close quarters are encountered.

E. J. L. (*Mass.*)



Using small square to check position of reed and raceplate

Spinning Room Practice

Proper lubrication and care of rolls and saddles; traveler speeds

By WILLIAM STOCKTON

THIS IS THE THIRD of a short series of articles on cotton mill spinning-room practice, with special emphasis on causes and prevention of yarn imperfections arising in the spinning room. The material was compiled from various sources and had been used by Mr. Stockton before his recent death in employee training courses in several southern mills

THE FRONT LINE of top rolls and saddles should be oiled once a day with a recommended oil, and middle and back top rolls and saddles should be oiled twice a week. Oiling should be done carefully to prevent oil from getting on aprons, top-roll coverings, or into the flutes of steel rolls. Careless oiling not only causes soiled and oily yarn, but also affects running quality when oil is allowed to get on roll coverings and aprons. Much money is wasted, represented by oil spilled on the floor; a good oiler can save his own wages for his company.

Lack of oil not only increases wear, it increases costs by lowering quality; it causes leather to become rough, and rolls to show excessive wear; it causes aprons to slip; it roughens saddles where they run on top rolls, causing jerky roll motion. The foregoing add up to uneven yarn and high end-breakage.

Many spinning-room overseers are too quick to increase the weight on top rolls when roving drafts unevenly. As little weight as possible should be used, because more weight increases wear on saddles, top rolls, and cap bars; and requires more power and more frequent oiling. Before roll weights are increased, less twist in roving and lower relative humidity should be tried as remedies for the situation.

When broken ends persist in lapping on the top rolls, and the leather of the rolls is not cracked or rough, the top lines of rolls are set too far back. The correct setting of the center of the front top roll is $\frac{3}{32}$ to $\frac{1}{8}$ in. in front of the center of the front steel roll.

When steel rolls lap up, inspect them to see if oil has gotten into the flutes. If so, the remedy is to clean them. Where steel rolls have become nicked from use of steel hooks or knives, the nicks will catch cotton and build up laps. To remove nicks, use a single-cut smooth file. To remove the projection left between the flutes, use a flute file. Under no circumstances use emery cloth, because its use destroys the sharp edges of the flutes.

Steel rolls should be in good condition, and should have tight joints, good bearings, and flutes which are straight and free from nicks. To determine if joints are loose, unhook the roll weights and turn the foot-end roll backward. Worn and scarred bearings may be determined by their appearance. Worn flutes, which result in poor drawing of the roving, can be found by the rounded appearance and by feeling the edges of the flutes. Crooked rolls can be seen while the frame is running; it is advisable to try to find the cause of crooked rolls. Repairing of the rolls is very delicate and requires a good workman.

If steel rolls chatter when frames are new, this may be overcome by using a heavy oil such as a steam-cylinder oil; one drop in a bearing often is sufficient. When the crown gear is meshed too deeply into the front roll gear it causes rolls to chatter; the stud in the swing arm should be raised to reset the gears. If the front-roll bushing binds, it will make the rolls chatter; the remedy is resetting of the front-roll bushing plate. Steel rolls often chatter after they are scoured; the remedy is use of heavy oil. A steel roll that chatters causes excessive wear on the top rolls; the first symptom is the tracking of the top rolls, then the leather covering peels.

When steel rolls are hard to turn, more power is required to pull the frame. Unnecessary consumption of power can turn an expected profit into a loss. To check rolls to see whether they are hard to turn, drop the weights, unmesh the gears, and turn them individually by hand.

THREAD BOARDS should be cleaned as often as is necessary to keep them clean, so that bunches will not get in the yarn. Normal setting of the thread board is even with the roller beam; however, there are instances when the thread board should be raised or lowered 1 in. in order to improve the running of the frame and decrease the number of ends down. Making this change increases or decreases the arc of contact of the yarn on the steel roll; this also changes the ballooning of the yarn. Substitution of round-nose for square bobbins may permit use of the thread board in the lowered position. The change will be most appreciated when making fine or weak yarn. When using a high roll and not too great distance between top of bobbin and thread guide, the thread board may be raised ½ in., which will cut down the arc of contact on the front roll and increase the drag and angle of yarn over the thread guide.

Improperly set thread guides cause ends to come down and uneven ballooning, which results in wearing of travelers. Thread guides should be so set that the bobbin points are directly below the edges of the wires at the back of the eyes, and should never be set below the centers of the eyes. Ends breaking down, or uneven ballooning, attracts attention to a thread guide that is out of place. Sighting through the eye of the guide wire to the top of the spindle will show if the guide wire is improperly set.

Traveler performance must be satisfactory if a spinning frame is to run well. This means that the circle as well as the weight must be carefully chosen. If the circle of a traveler is too large, it allows bunches to pass through without breaking the end down. If two travelers are the same weight, the one with the smaller circle will have a larger cross section and can be run at a higher speed; the heavier wire withstands the frictional heat longer than the lighter wire used for the large-circle traveler. The traveler should not be too large or too small to prevent the traveler tipping and running in its normal position. If the traveler is short lived and burns off instead of having its normal wear, check the speed by the following formula: dia. of ring $\times$ 3.1416 $\times$ rpm. of spindle $\div$ 12 = ft. per min. High traveler speed can be changed by reducing the spindle speed or by reducing the diameter of the ring. When the traveler used is several numbers lighter than the yarn requires, it is an indication that the traveler speed is too high, and is an invitation to trouble.

Travelers run at excessive speeds get red hot and deposit melted metal on the ring; this is sometimes called "loading the ring," and is found more often when starting new rings. A traveler running under this condition will burn and fly off in a short time. "Loaded" rings can be burnished.

Round- or square-pointed travelers are optional when spinning light yarns and using light travelers. Round-pointed travelers are necessary to permit the wide, heavy traveler to run in its natural position.

QUESTIONS & ANSWERS

Spinning-Room Help

Technical Editor:

We are wondering if you would be so kind as to let us know the number of operatives as employed in some of the most up-to-date plants in the United States to take care of the following machinery:

18 Whitin Casablancas long-draft warp spinning frames of 324 spindles each, with 1¾ in. ring.

12 Whitin Casablancas long-draft filling spinning frames of 304 spindles each, with 1⅜ in. ring.

We should like to have this information for average counts 20s, 24s, and 30s for both warp and filling, spun from 1½ den., 1⅝ in. bright viscose cut staple. (8829)

To operate the frames two spinners would be required on each shift; spinners would do all cleaning. The number of doffers, etc., required will depend on local conditions. The number of doffers needed can be determined by ascertaining the running time of each doff on full bobbins and the time required to doff each frame. If one of the doffers attends to the fixing of the frames, the time required for this will have to be figured in. We assume the spinning frames are located in a room with other machines and that there are roving men and sweepers. If this is not so, the doffers would have to take care of the work ordinarily done by roving men and sweepers. It is apparent, therefore, the number of operatives needed will vary, depending on whether the spinners and doffers do all the work, or whether part of the work is done by roving men, sweepers, etc., who also have duties in connection with other machines.

Cleaning Dry Cans

Technical Editor:

Kindly advise us as to the best way to wash tin dry cans so that after running black colors they are clean enough to run light colors.

We are looking for the fastest way possible, as time is the important factor. (8826)

The quickest and most economical means of cleaning a dry can is to throw a piece of wet cloth over the latter while it is in motion and warm. The operator holds on to the cloth, with the result that the can revolves against the wet fabric and automatically cleans itself. In some instances it may be necessary to use a cloth moistened with ammonia or a weak soap solution. It is always best, however, to finish off with a second cloth or the same cloth rinsed out in plain cold water. When cleaning a nest of cans only the first two usually require cleaning, since the remainder rarely ever become stained. With sufficient damp cloth five minutes should suffice to clean a can.

Variation in Size Take-Up on Slasher

Technical Editor:

In slashing filament rayon warps we think we are obtaining excessive variation in percentage of size taken up by the yarn. What amount of variation should we expect, and when calculating size take-up on a full set how should we allow for moisture and moisture variation? (8813)

If your size box is heated by indirect steam and there is no leak in the system so that the size becomes diluted, and if you keep the size box at a uniform temperature and the slasher running at a fairly constant speed, there should be no material variation in the percentage of size taken up by the warp. The variation should usually not be over ¼%, and not in any case above ½%.

If the conditions in the first paragraph are followed, and no non-uniformity exists, and the variation still persists, it is safe to say that the size material is not providing the uniform results it should and that another size should be adopted.

The only safe way to figure size take-up is by means of a comparison between boil-offs of sized and unsized warp yarns. This is not possible when the warps are sized on the silk system unless the sample is taken from the end of the beam or between cuts.

Proper attention to uniformity of heat on drying cans and to relation of heat to slasher speed will hold warps to a fairly even moisture content. Thermostatically controlled recording devices are a great help in securing a good, evenly sized warp with correct moisture content. In general, it can be said that warps will come off the slasher with a moisture content of from 5 to 7%, if there is no conditioning equipment on the slasher.

Snick-Plate Settings

Technical Editor:

In the August issue of TEXTILE WORLD, there was an article titled "Eliminating Yarn Defects." I would like to ask the author a question regarding the diameter of the yarns and the settings of the snick plates on spoolers and winders. Is it possible in his experience to set down to his calculated figures and not damage the yarn by chafing? We are anxious to do some experimenting, but in comparison with Barber-Colman recommendations for our counts of yarn, the author's figures are decidedly too close. These settings the manufacturers suggest are about 50% over the actual diameter of the yarn, using the formula given in the article. (8834)

(This question was referred to the author of the article in question. His reply follows.—*Editor*)

My formula is based on the fact that 261 strands of 100s cotton warp yarn twisted 4.75 x square root of yarn count occupy a space of 1 in. The same would be equal to 26.1 strands of 1s. Thus, a strand of 1s warp yarn is approximately 1/26 in. in diameter. Or, 1.00000 ÷ 26.1 = .0385. Hence 26.1 x square root of count shows the number of strands of that count that will lie side by side in a space of 1 in.

This is a valuable formula where several different counts are being run and spooled, but any variation in the twist multiple will make it necessary to change the formula, as yarns with less twist will have a larger diameter. The gentleman may change the formula to suit his yarns, if my formula gives him settings too close to suit his yarns.

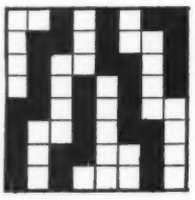
Revamping Fabric Construction

Technical Editor:

Inclosed is a sample of 32 oz. wool cloth. I wish to make a fabric like this, using 1-run woolen yarn, for both warp and filling. The cloth is to be finished 60 in. wide. I will appreciate your advising me as to the number of warp ends I should use, and the picks per inch on the loom. Also the size reed to use and width to run in the loom. (8825)

The sample inclosed weighed 35.5 oz. per yd. on a 60-in. wide basis. To make a 32-oz. fabric, using the yarn mentioned above, we suggest the following:

Warp—1,600 ends of 1-run wool, reeded 2 ends per dent in an 11-dent reed; set 72¾ in. wide in the reed. Filling—24 picks per in. on the loom, of 1-run woolen yarn. Weave—as shown in accompanying sketch.



The fabric should weigh 35¾ oz. per yd. from the loom. Full yard to 33 in. The fabric should finish 32 oz. per yd.

LOOMFIXERS' MANUAL

COTTON SECTION—Chapter XVI Continued and Chapter XVII

By IVAR MOBERG

Box Multipliers

THE OVERHEAD BOX MULTIPLIER recently developed by Crompton & Knowles Loom Works was described in last month's installment, and directions given for drafting chains by one of two possible methods. The second method of chain drafting is less complicated but requires a somewhat longer box chain. Some loomfixers prefer the simpler chain, in spite of its length, but the dependability of the overhead multipliers is such that the more complicated chain should not prove troublesome. When using this second method, the box chain is drafted for half of the margin, all of the first border, and half of the body; in other words, for just half of the filling pattern. The chain then reverses direction and produces the other half of the pattern. Chain drafting by this method is illustrated in Fig. C101.

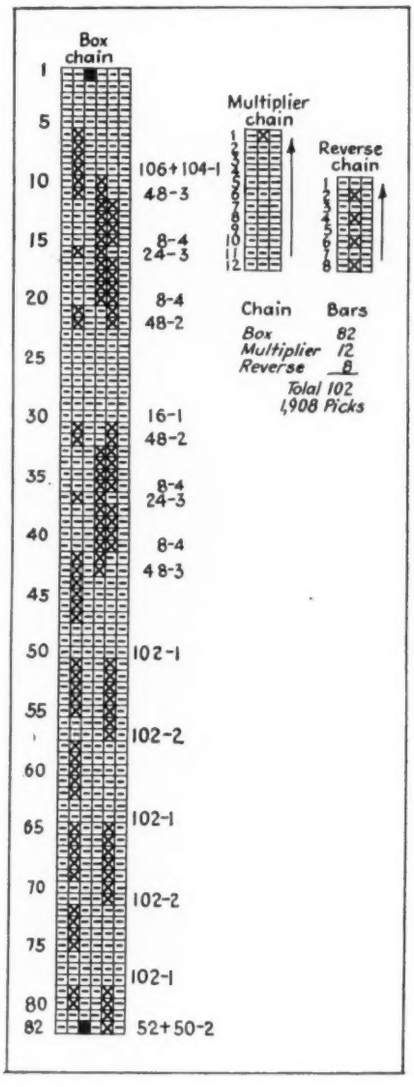


Fig. C101. Drafting chains for overhead box multiplier by second method

In drafting by this method the box chain is built for half of the filling pattern and reverses twice in the blanket; once at the middle of the margin and once at the middle of the body. The chain, running in the normal direction from bar No. 1, produces first the margin, then the first border and half of the body stripes. Bar No. 82 calls the reverse chain, which moves one bar and brings a roll in the second position under the lever. This reverses the direction of the box chain, which then produces the other half of the body stripes, followed by the second border and the margin. When bar No. 1, which contains a solid in the third position, is again reached, the reverse chain is again called and brings a tube under the lever. This changes the direction of the body chain to normal and production of the second blanket begins.

It should be evident from the above discussions that by proper arrangement of chains a considerable reduction in the length of chains for any filling pattern can be accomplished. In laying out a pattern, the type of multiplier available should be considered. Also, in many cases the length of chains may be considerably reduced by a slight change in the filling pattern, which would have no effect in the attractiveness of the design.

It is very important that box multipliers be kept in good condition at all times. Improperly operating multipliers can cause more seconds and spoiled fabrics than probably any other loom part. They can cause such serious defects as missing borders, double borders, faulty borders, short length, and long length. These defects are extremely difficult to detect in the loom by the weaver and are most often first detected in the inspection after the cut is woven.

Chapter XVII—Shuttles

AN IMPORTANT ROLE in successful weaving is played by shuttles, and it is therefore necessary that they be carefully chosen. Of course, any reliable shuttle maker will supply the best of shuttles if permitted so to do. Some mills, however, because of lower initial cost, are tempted to purchase inferior grades. This is a most uneconomical practice, and such procedure should not be followed.

Fig. C102 shows top and side views of a Draper shuttle with cast-iron eye. The cast-iron eye is a relatively recent development and is one of the easiest threading eyes there is. This eye will thread up merely by tightening the filling, while some former types will not thread up before several inches of the filling have been pulled off the bobbin. Some mills claim that it is difficult to obtain proper filling tension in shuttles with cast-iron eyes; however, in the writer's opinion tension obtained with these shuttles is sufficient for probably 95% of all cotton fabrics produced on automatic, bobbin-changing looms.

(To be Continued—Editor)

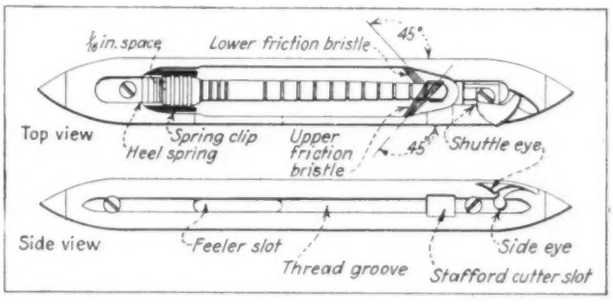


Fig. C102. Top and side views of Draper shuttle with cast-iron eye

NEWS OF THE MONTH

Power Curtailment in Southeast

A drastic power conservation program to insure full and uninterrupted operation of plants in the Southeast working on defense contracts was put into effect Nov. 10 under a limiting order signed by Donald Nelson, as Director of Priorities, and later postponed until Nov. 17.

Consumers may use up to 10,000 kwh. per month at a rate of 2,500 kwh. per week without being curtailed. A 30% reduction in power consumption applies to consumers using more than 10,000 kwh. in Alabama, Georgia, Tennessee, Eastern Mississippi, Northwestern Florida, and Southeastern South Carolina, including Charleston. This reduction applies to a number of power companies named in the OPM order.

A 5% reduction was ordered in North Carolina and most of South Carolina, and later postponed indefinitely.

Exemption from the curtailment order is provided for operations found by the Director of Priorities to be essential to defense or to essential civilian service. Consumers who believe they are entitled to exemption should apply to the Director of Priorities, OPM, Federal Reserve Bank Building, Atlanta, Ga.

OPM officials told TEXTILE WORLD that the first thing for a textile mill operator to do, even if he has defense contracts, is to try to figure out some way to meet the curtailment and not bother the Government about it. But if he cannot meet it, then OPM will welcome his application, and will give it careful and speedy consideration.

Persons experienced with waterpower in the Southwest say that the shortage might continue through the winter without relief until spring. On the other hand, it might be relieved by fall rains.

This curtailment order sets a pattern for possible power shortage all through the industrial East Coast next year, due not necessarily to lack of water, but to mounting consumption and priorities on turbines and generators in favor of shipbuilding.

Textile Research Meeting

Plans for the annual meeting of the U.S. Institute for Textile Research scheduled to be held at the Roosevelt Hotel, New York, Nov. 14, assumed particular importance this year because of the revitalized status of the Institute, and the working arrangement made between it and the Textile Foundation. Details of the meeting will be given in these columns next month.

Government to Increase Stock-Pile of Wool

It was understood that the United States Government through the RFC closed a deal about the middle of last month for the purchase of 400,000 bales of South African Cape wool. This material is to be shipped here and held for eventualities. About the same time it was announced that the Defense Supplies Corp. had purchased about 176,000,000 lb. of British-owned Australian wool which is part of the 250,000,000 lb. being shipped to this country as part of a plan set upon early in the year. The Australian plus the Cape wools make a stock-pile of about 300,000,000 lb. It is understood, however, that OPM has recommended that a substantially larger stock-pile be developed.

Rayon Worries in Foreign Centers

Because of the growing shortage of industrial salt and caustic soda in Japan it is understood that a plan is on foot there to concentrate rayon yarn and staple fiber production in the hands of a small number of firms possessing highest technique and to have other companies voluntarily amalgamate with them.

The Mexican textile industry is believed to face a shortage of rayon yarn since it is no longer possible to import former quantities from Italy and Japan. It is understood that American yarn available to the Mexican industry has been reduced because of the need for rayon in this country to substitute for silk. Cuba and South American countries are also said to be in need of rayon supplies. An allocation of rayon to Mexico through OPM is believed probable.

Simplifying Hosiery Packaging

National Association of Hosiery Manufacturers has recommended that the quarter-dozen box be discarded for all hosiery except Nylon stockings. Half-dozen boxes were recommended as standard. This step toward economy has been taken in advance of any direct request by OPM. It is believed that if generally adopted the OPM will be more likely to permit continued use of the quarter-dozen packings for Nylons, which are often delivered in quantities too small to justify the use of half-dozen containers.

CORDUROY is now accepted in Milady's boudoir for bedspreads and as one of the permanent decorative features of beds themselves. Photo shows a modern bed with both headboard and footboard panels done in a soft rose-colored new type of corduroy called Featheroy, with bedspread to match. Completing the ensemble, the young lady is wearing a heavier weight corduroy, fashioned into a tailored robe of more deeply shaded red. Corduroy by A. D. Juilliard & Co.; bed by Frank A. Hall & Son

WINTER HIGHLIGHTS in formal fashions. All in Crown Tested rayon crepe. Bolero dinner dress with brilliant contrasting midriff and lapels; Metallic braiding outlines the elongated torso of the center glamour gown; and contrasting yoke of white sequins and smart back peplum in third.

Government Surveys Silk and Rayon Industry

The U. S. Department of Commerce as part of its industrial reference service has issued a booklet on "The United States Silk and Rayon Industry, August, 1941" by E. A. Mann. This is a timely survey of the situation resulting from the freezing of silk and presents interesting facts regarding the basic raw materials, defense needs, the various consuming industries, the resulting labor situation, and includes several tables and charts covering significant statistics.

Throwsters Institute Discontinues

Throwsters Research Institute ceased to function as the trade association for the throwing industry as of Sept. 30. George A. Urlaub, executive director, had resigned several weeks before. George A. Fenton, the last president of the Institute, in a letter sent to the trade stated that the vital records of the Institute were being transferred to the offices of the National Federation of Textiles, New York. This move has been explained as merely a matter of storage and that the functions of the former institute are not being taken over by the federation.

Wholesalers Take Attitude on Surcharges

The Wholesale Dry Goods Institute on Oct. 23 issued a brief statement on the attitude of its members toward surcharges imposed to absorb increased costs. The wholesalers recognize the fair treatment accorded by most mills, but at the same time condemn the action of a small minority in taking advantage of the current situation. They believe that mills should honor the sanctity of contracts and should

These days the eyes of the world are turned upon American industry. For by the increased production of plants and mills like your own momentous issues will be decided. American industry is striving to meet with courage, devotion and intelligence the demands made by national defense.

This is the time, of all times, for manufacturers to enlist the aid of modernization to achieve a vastly increased flow of goods. Today it is not only good business, it is good Americanism to modernize your plant so that production may flow swiftly and uninterruptedly.

This organization has a long and honorable record of service to the textile field. It has specialized in the manufacture of stainless steel textile equipment since the appearance of stainless steel as an alloy for industry. It maintains an organization of engineers to consult with manufacturers on the most effective designs or to create special equipment for all purposes.

These engineers are constantly engaged in studying the newest, and most modern production methods. Our large plant possesses the most up-to-date machinery—much of it specially designed—for the fabrication of stainless steel textile equipment. We stand ready to give the fullest aid to companies producing for the emergency that now confronts the nation. To those producing for commercial needs, we can recommend methods of relining equipment provided that such changes do not run contrary to defense needs or priority regulations. We promise to make every effort to fulfill requests as promptly as possible.

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EST 1869
Specialists in the manufacture of stainless steel textile dyeing equipment

For Cutting
RAYON,
WOOL,
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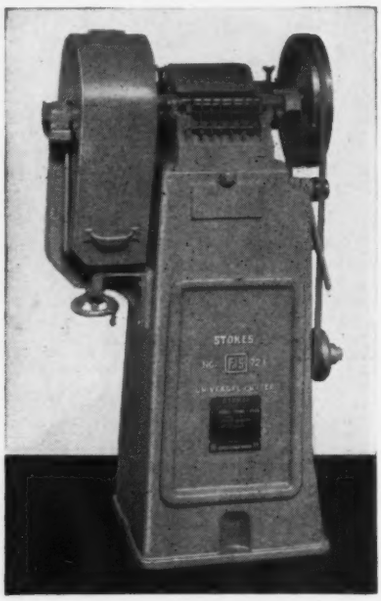
RAMIE,
COTTON
and Other Fibres . . .
Wet or Dry



New! Stokes Universal Fibre Cutter

No. 72 E

This machine makes 500 to 20,000 knife cuts per minute . . . and handles 4 to 8 tops, or equivalent, simultaneously.

•

Four interchangeable cutter heads produce full range of fibres, from flock to 8″ lengths.

•

Variable speed drive with synchronized feed, for any desired length of cut or type of material. Instantly adjusted.

•

Other features include Self-Sharpening Knives; Tension Release for Feed; Hand Wheel Adjustments, while operating, for speeds and length of cut; Balanced Heavy-Duty Cutters, ball-bearing mounted.

Cutter Head	Length of Cut Max.	Min.	Approx. No. of cuts per min. Single Strand
A	8″	½″	500
B	4″	½″	1,500
C	2″	¼″	3,000
D	For Flock	⅛″	20,000

Write for complete information

F. J. STOKES MACHINE CO.
6004 Tabor Road Olney P. O. Philadelphia, Pa.

F.J.Stokes FJS Est 1895

ANNOUNCES POWER TO CONFER DEGREE—M. Earl Heard (shown above), dean of Philadelphia Textile School, announced at recent meeting of the New York Club of the school alumni, that authority has been granted the school to confer the degree of Bachelor of Science in Textiles. Two four-year degree courses are offered, one in textiles, the other in chemistry, dyeing and printing. Seventy percent of the freshman class has enrolled for degree courses. Three- and two-year courses heretofore offered will be continued

refuse to yield to pressure by late buyers for priority treatment, and that they should refrain from attempting to force cancellations upon wholesalers in order to obtain better prices for themselves. They believe that surcharges should include only the actual increased costs directly attributable to Government legislation, and that, where there is a disagreement concerning a surcharge, deliveries should not be withheld but instead shipments should be made as called for and the controversy subsequently adjudicated.

Form American Silk Council

The American Silk Council was formally organized last month, and it has established headquarters at 468 Fourth Ave., New York. Its primary purpose is to represent the interests of its members in solving some of the problems facing the silk trade at this time. Max Wehrlin, of Charles Rudolph Corp., was elected president; Louis Kahn, Kahn & Feldman, vice-president; and A. C. Forney, A. D. Walker & Co., secretary and treasurer. A secondary purpose of the new organization may be to put the silk trade back into American control when and if trading with the Orient and other silk-producing countries is resumed.

Celanese Issues New Price List

The Celanese Corp. of America on Oct. 27 issued a new price list effective Nov. 1 which marks reductions of 1 to 3c a pound from the list issued on Oct. 6. The 75-denier which had previously been advanced 5c to 83c, was reduced to 80c. The 45-denier which had been similarly advanced to $1.08 was reduced to $1.07. The 100-denier which had been advanced only 3c to 75c, was reduced to 73c.

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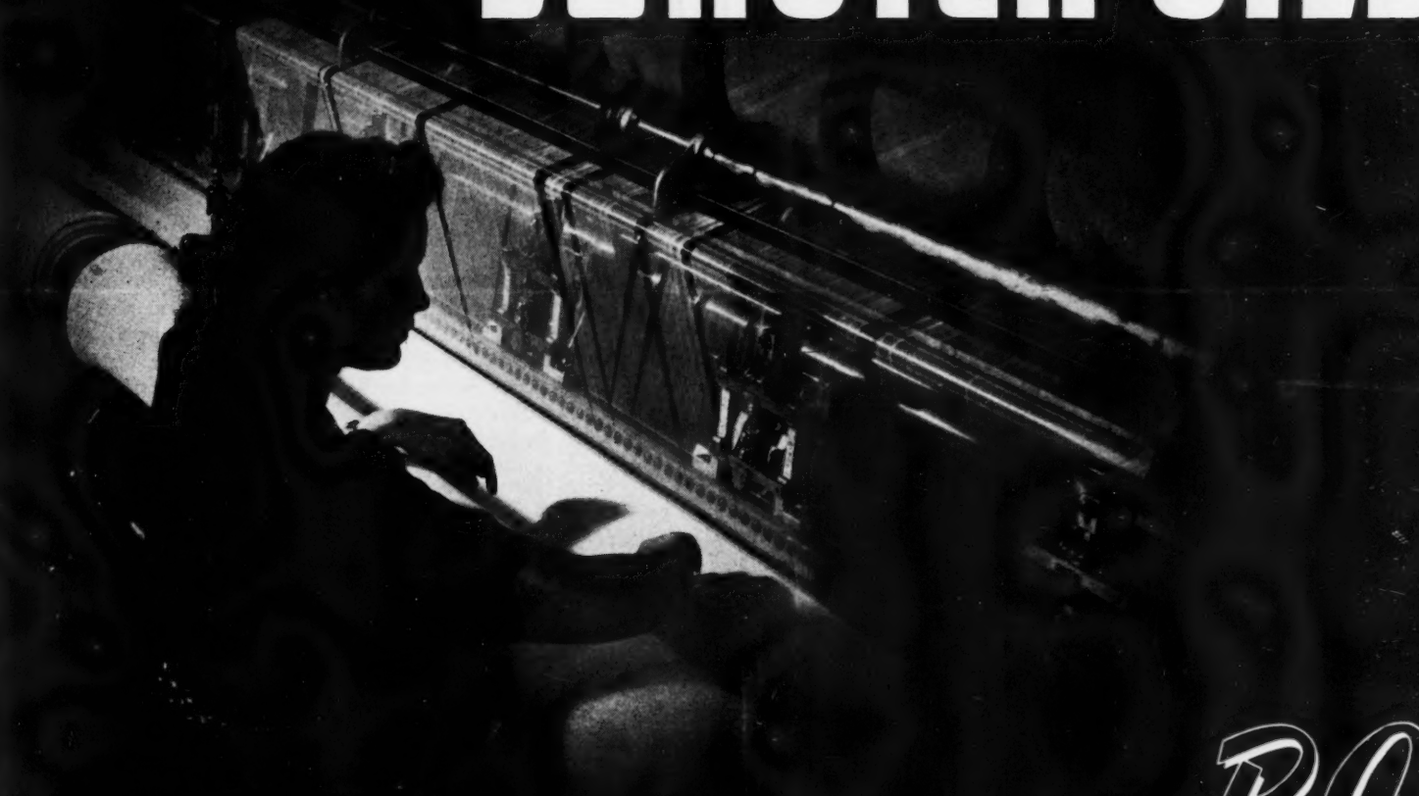
Smooth Knitting

with the UNIFORM PENETRATION and FIBRE LUBRICATION of

SUNOTEX OILS



Modern Oils Help Rayon Processor Set Higher P-Q*

Maximum wetability . . . uniform penetration . . . greater pliability . . . and smoother knitting — that's what SUNOTEX OILS are making possible in leading rayon plants. These modern rayon processing oils are certainly doing their part to speed up production . . . to make possible a higher Production Quota (P-Q*) for the rayon industry.

For example, one large rayon processor changed over to SUNOTEX OILS and, almost immediately, he reported

- **BETTER WETABILITY**
- **QUICKER PENETRATION**
- **IMPROVED SOFTENING**
- **EASIER SCOURABILITY**

Little wonder he was able to slash processing time . . . little wonder time and trouble is saved in knitting operations and a higher P-Q* is set.

If you're faced with a processing or production problem, now's the time to call in a SUN Textile man. Let him prove how SUNOTEX OILS can help step up quality and production. Just write

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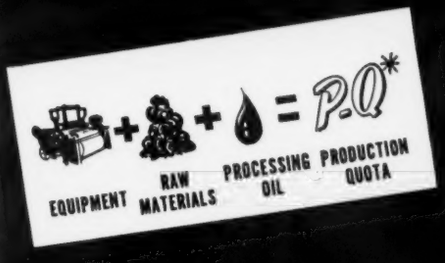

SUN OILS

PETROLEUM PRODUCTS FOR ALL INDUSTRIES

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To the textile industry Penn Salt supplies

CAUSTIC SODA • HYDROGEN PEROXIDE • SODIUM HYPOCHLORITE • SODA ASH • SULPHURIC ACID • HYDROCHLORIC ACID • CARBON BISULPHIDE • AMMONIUM PERSULPHATE • ANHYDROUS AND AQUA AMMONIA

THE PEACE THAT WAS MORE THAN A PIPE-DREAM

After William Penn made his famous treaty under the elm in 1683, he kept such faith with the Indians that his colony prospered from the start. Within three years there were 8,000 colonists living peacefully in Pennsylvania.

Integrity is fruitful in business, too. It is progressiveness in manufacture and persistence in research that gives Penn Salt its reputation for improved chemical products. And it is efficiency that makes its technical service so helpful to customers. The growth of its sales from small beginnings ninety-one years ago to its present nation-wide scope rests chiefly on the record it has earned for keeping faith in every business contact.

CHEMISTRY IS THE KEYSTONE OF INDUSTRY

PENNSYLVANIA SALT MANUFACTURING COMPANY
1850 Chemicals 1941

WIDENER BUILDING, PHILADELPHIA
NEW YORK • CHICAGO • PITTSBURGH • ST. LOUIS • WYANDOTTE • TACOMA • PORTLAND

Discuss Statistical Methods for Testing

A feature of the fall meeting of Committee D-13 of the American Association for Testing Materials held last month in New York was a symposium on use of statistical methods in testing. A. E. Brandt, of the U. S. Dept. of Agriculture, spoke on engineering use of statistical techniques in testing. Dr. A. G. Scroggie, E. I. duPont de Nemours & Co., Inc., described statistical methods for determining number of tests for strength and elongation of rayon yarns. Lillian Weidenhammer, U. S. Bureau of Home Economics, presented a paper on application of the recommended practice in the selection of a chemical test method and in determining its precision. Other speakers were Edwin C. Dreby, research associate at the National Bureau of Standards, who presented a report on recent developments in glass textiles; and K. N. Mathes, of General Electric Co., who spoke on progress in testing glass textiles.

Annual Hosiery Conference, Jan. 15-16

The annual conference of the hosiery industry sponsored by three associations will be held at Waldorf-Astoria Hotel, New York, Jan. 15 and 16.

Textile Engineers to Meet Dec. 3

The annual meeting of the textile division of the American Society of Mechanical Engineers will be held at the Hotel Astor, New York on Wednesday, Dec. 3. The program includes the presentation of papers on engineering characteristics of various fibers, by Werner Von Bergen; the upper limits of temperature and humidity for fibers in dry operations, by Albert C. Walker; and textile colleges and their relations to the textile industry, by Frederick M. Feiker.

Introduce Plastic Monofilaments

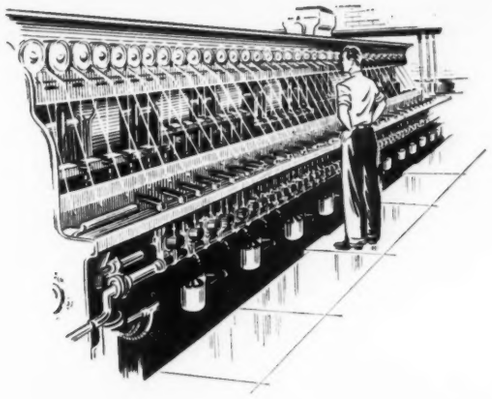
Introduction of various types of plastics in the form of monofilaments has been announced recently by Erie Resistor Corp., Erie, Pa. Filaments are of the following types: cellulose acetate, cellulose acetate butyrate, and vinyl resins. Filaments as fine as 0.01 in. are being produced. Among the potential uses for the monofilaments are in weaving of various types of fabrics, as binding for automobile seats, and as "assist" cords in automobiles. The plastics are also being extruded in strip form for weaving into upholstery for subway car seats and other purposes. The filaments are produced in various colors and in different degrees of hardness.

Plans Completed for Chemical Show

Plans have been completed for the 18th exposition of the Chemical Industries to be held in Grand Central Palace, New York, Dec. 1-6. More than 300 exhibits will mark the advances in chemical production and chemical processing.

Committee to Establish Olive Drab Standard

At the request of the Government, the American Association of Textile Chemists and Colorists has formed a committee to cooperate with the Quartermaster Corps in the establishment of a standard olive drab for uniform fabrics. Dr. Louis A. Olney, of Lowell Textile Institute, is chairman of the committee. Members of the committee include a number of men connected with textile mills and dye and chemical companies.



Modern Spinning Machines Help Speed Rayon Output

"Right now, when increased Rayon production is so important to the entire industry, we are setting new spinning room records with the latest type fast traverse Butterworth Pot Spinning Machines.

"Speeds range as high as 90 strokes per minute with excellent results. The traverse action is 3½ times as fast as formerly.

"Our power costs are actually lower despite the higher operating speeds. Friction is reduced because the machines are built entirely without cams, run in oil and are automatically lubricated.

"Butterworth also supplies the same mechanism mounted in grease-sealed ball bearings driven by Micarta gears, eliminating the use of oil in the Godet shafts.

"The machines are constructed with all materials acid resisting.

"We are producing cakes that are open and easily washed, saving chemicals and time. Butterworth Pot Spinning Machines bring cake finishing within the realm of practicability."

We make this report so that you may know the part played by Butterworth Spinning Machinery in the all-out production of Rayon.

In the wet end of textile finishing, many a trickle of production has been turned into a mighty cascade of textiles with modern Butterworth Machines.

For more than 120 years, we have designed and built machines to promote efficiency in the wet end of textile finishing—bleaching, boiling-out, drying, calendering and dyeing. We know all the small advantages which, collectively, make the difference between profit and loss.

Think and plan ahead now to the time when modern Butterworth Machines will help you to do a better, faster finishing job. Write us fully about your problems.

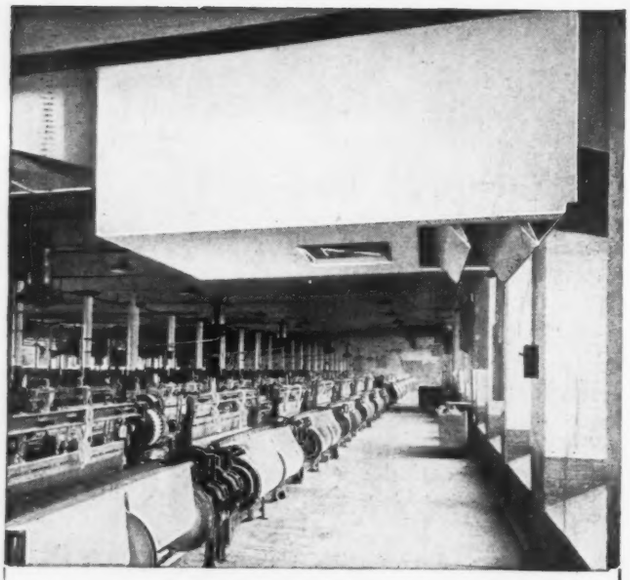
H. W. BUTTERWORTH & SONS CO.
Phila., Pa., Serving the Textile Industry Since 1820.
Offices: Providence, R. I. and Charlotte, N. C. In Canada—W. J. Westaway Co., Hamilton, Ont.

***64%**

of equipment now in use in the wet end of textile finishing cannot operate at a profit in competition with modern machines.

*Proved by Research

Butterworth



Behind the Airchanger
. . . AN IDEA

In developing the modern Airchanger idea for you, we started to answer the questions you textile men have been asking. Why up and down humidity? Why spotty conditions?

The Parks Automatic Airchanger measures incoming air. Admits only just so much. Just as much as constant humidity will permit—and NO MORE.

In hot weather it gives you all the evaporative cooling the humidifiers can develop. Keeps them running. Lets in as much air as possible.

On the contrary, the cooler the weather, the more the incoming air is restricted.

But all the time it is the humidity that stays put—and in all parts of the room.

It is that kind of automatic regulation that makes it an Airchanger. And only the Parks Automatic Airchanger has regulation like that.

Parks-Cramer Company
Certified Climate
Fitchburg, Mass. Boston, Mass. Charlotte, N. C.

TEXTILE CALENDAR

South Carolina Division, S.T.A., regular meeting, Clemson, S. C., Nov. 15, 1941.

Alabama Textile Operating Executive Association, fall meeting, Auburn, Ala., Nov. 29, 1941.

18th Exposition of Chemical Industries, Grand Central Palace, New York, Dec. 1, to 6, 1941.

Southern Textile Association, annual meeting, Blowing Rock, N. C., June 11 to 13, 1942.

Trade Association Conference

One of the most valuable of the textile meetings of the year occurred Oct. 29, when the Textile Trade Association Coordination Conference was held in New York under the auspices of the Cotton-Textile Institute. Dr. Claudius T. Murchison, president of the Institute, presided. Representatives of many textile associations attended.

A good part of the discussion focused on the constructive question of the place of the trade association in relation to the defense program and to the adjustment of civilian problems. Out of the discussion, which was off the record, should come a still clearer realization of the importance of trade organizations in this emergency.

Opposes Rise in Underwear Wage Base

Hearings were held Oct. 14 on the 40¢ minimum wage recommendation of Industry Committee No. 28, Wage-Hour Division, on Knitted and Men's Woven Underwear and Commercial Knitting. The Underwear Institute, speaking for the seven manufacturing members of the committee, who had refused to sign the recommendation, said that small mills would be hurt by the proposed increase from a minimum wage of 33½¢. Institute representatives said that small-town mills are losing their workers to higher-paid defense industries in the cities.

Portable Compressors Tide Over Breakdown

A recent breakdown of a 335-hp. motor driving a main compressor supplying air to the humidifying system of the Chicopee Mfg. Corp., Manchester, N. H., threatened several weeks' delay for obtaining new coils under present priority conditions. The situation was met by obtaining nine gasoline-driven compressors from a local contractor, lining these machines along an outside wall, connecting the air receivers to a common header and from this supplying the air system of the plant.

This and That

S. Augstein & Co., College Point, L. I., on Oct. 7 presented their "Follyless Fashions of '42" at the Hotel Plaza, N. Y., to an audience of about 1,200 buyers and merchandise managers representing retailers throughout the country. The style show was elaborately staged, and the firm's new line of knitwear, bathing suits and sportswear was preceded by a display of some of the follies of earlier style periods. The new line included many novelties in jacquard knitted suits in a wide variety of plaids, and knitted dresses featuring sueded jersey.

Tacoma (Wash.) **Philharmonic Orchestra** is now printing its programs upon coated cotton fabrics in order to save its audience the annoyance of constant rustling of paper

Check Credits

Cash Sales

Absorb Credit Losses

Correspondence Invited

Darnell
CASTERS & WHEELS

Economy--

It pays to demand Darnell Dependability. Darnell Products reduce the overhead that is underfoot by reducing floor wear to a minimum.

For Savings Specify **DARNELL**

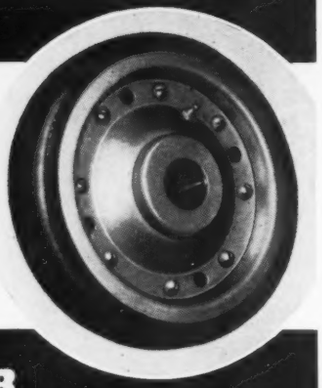
Efficiency--

Employee efficiency is stepped up with Darnell Casters and Wheels. Double Ball Bearing Swivel assures easy rolling.

A SAVING AT EVERY TURN

Durability--

Darnell Products are made to give a lifetime of Trouble-free service. They keep turning and earning. Buy Darnells!



Write **FOR NEW MANUAL**

. . . 192 pages of helpful information. Here is a valuable data and reference book that should be in your files . . .

DARNELL CORP., LTD., LONG BEACH, CALIF.
36 N. CLINTON, CHICAGO • 60 WALKER ST., NEW YORK

programs. For some time this fabric "paper" has been used for radio scripts to be read at the microphone for the reason that it eliminates the rustling sound caused by turning of pages.

Five of the Scottish producers of "Harris Tweed" fabrics, and their United States agents, have been charged in a complaint issued by the Federal Trade Commission on Oct. 25 with combinations and conspiracies to restrain and monopolize the sale of their products in trade and commerce between Great Britain and the United States, and between the States.

Celanese Celok sweatbands and linings in men's hats is one of the newest adaptations of the useful characteristics of synthetics. The principle is similar to that in the wrinkle-free collar on shirts. The sweatband has Celanese yarn woven into the interlining, which, on later treatment, cements the fabrics together. The sweatband is unaffected by perspiration, washing or cleaning and is said to outlast the life of the hat.

Wool Fashion Council of London sponsored a style show under the direction of June Hamilton Rhoades at the Hotel Plaza, New York, Oct. 20. Twenty-five coats and dresses by British designers and made from British woolens were displayed. Several of the designers have been bombed out of their shops several times and several other of the designers are now in the Army but come back week-ends to whip up attractive numbers for women of the Empire.

Standard specifications for denim and broadcloth will be developed by a committee to be appointed by the American Standards Association as a result of a meeting held recently in the Office of the Consumer Division of OPM.

Dr. Edwin A. Robinson, technical director, National Oil Products Co., Harrison, N. J., spoke on the use of synthetic yarns in the manufacture of full-fashioned hosiery at the October meeting of the Midwest Section of the A.A.T.C.C., in Chicago.

Dr. Elmer K. Bolton, chemical director, E. I. duPont de Nemours & Co., Inc., was presented the chemistry industry medal at a joint meeting of the American section of the Society of Chemical Industry, the New York section of the American Chemical Society, and the New York section of the American Institute of Chemical Engineers, held Nov. 7 in New York.

The college girl and her sweater-skirt ensemble is becoming traditional according to a survey made by the magazine, *Design for Living*. The survey showed that the college women spent 75% of their time in a sweater-skirt outfit.

"Brides of Two Centuries" was the featured theme of the 1941 annual fashion show given by the American Viscose Corp. at a luncheon under the auspices of the New York City Federation of Women's Clubs on Oct. 30.

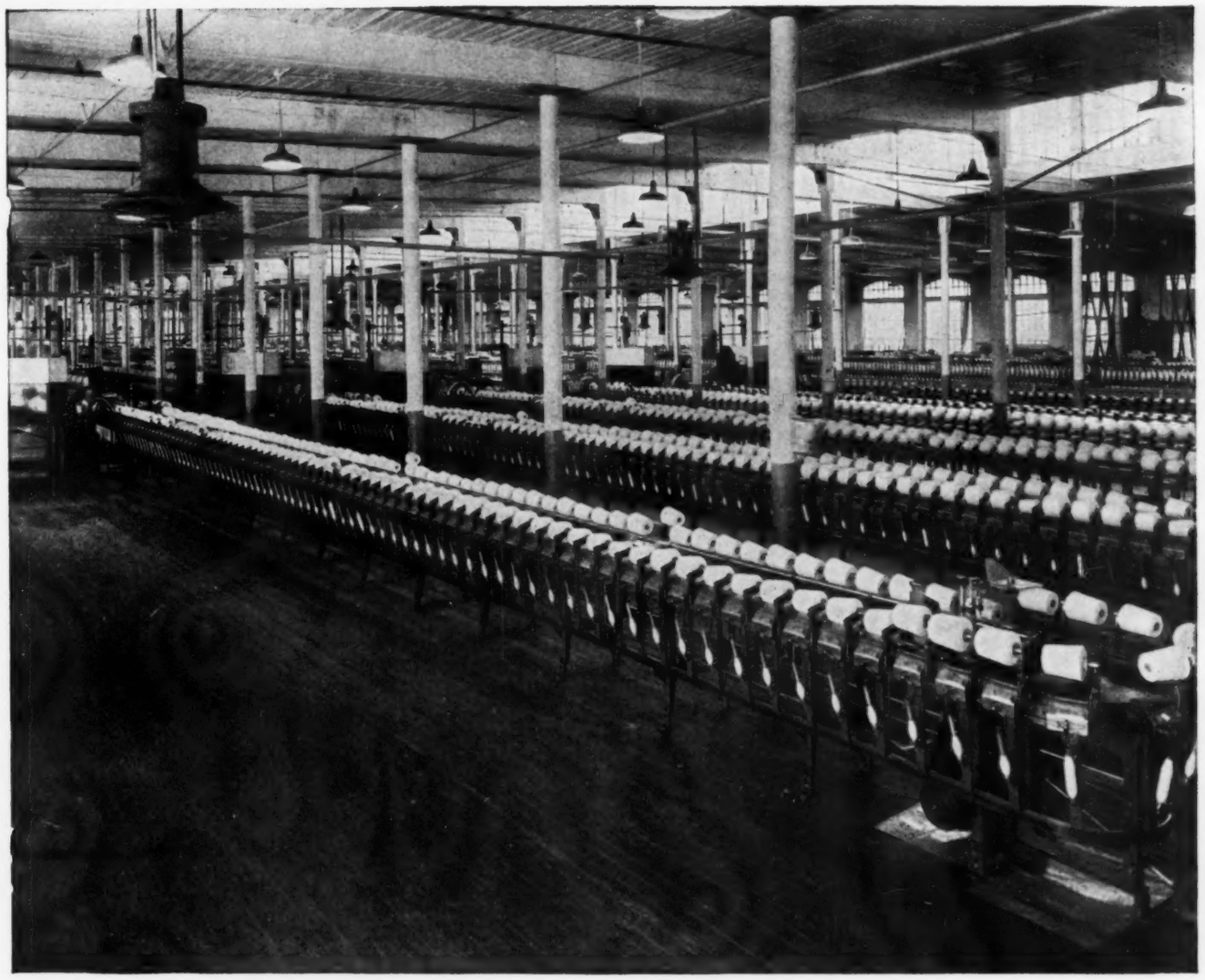
The black sweater was featured last month by R. H. Macy & Co. The display ranged from the plain cardigan to be worn with slacks to a smartly tailored button-front sweater to be worn with a long flowing evening skirt.

Rayon uniforms for women field workers of the British-American Ambulance Corps have been introduced. Of Crown tested rayon, fabrics in ochre, olive green, beige, and red are used.

Beaumont Mfg. Co., Spartanburg, S. C. is now operating 100% on defense production, and it is believed may possibly be the first textile mill with such a record.

Settlement of raw silk futures contracts was proposed by the Board of Governors of the Commodity Exchange, New York, was stopped by application of Mitsui & Co., Ltd., for an injunction.

Recent reciprocal trade agreement with Argentina which



AUTOMATIC TRAVELING SPINDLE WINDING

KNITTING CONES ***DYE TUBES***
WARPING CONES ***TWISTING TUBES***

LABOR IS USUALLY REDUCED 1-3

LARGE SAVINGS ALSO MADE IN HANDLING TO AND FROM WINDERS

BIG SIX POUND CHEESES IN TWISTER CREELS MAKE A FURTHER SAVING IN CREELING

AUTOMATIC WINDING IS NO LONGER A NOVELTY. IT IS STANDARD IN ALL PROGRESSIVE MILLS

LABOR FREED IN THE WINDING AND WARPING DEPARTMENT IS AVAILABLE FOR INCREASED PRODUCTION THROUGHOUT THE MILL

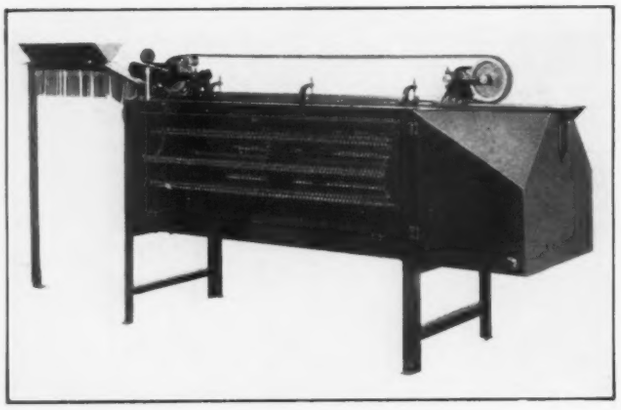
THIS EQUIPMENT IS MADE ONLY BY

ABBOTT MACHINE COMPANY

WILTON, N. H.

Southern Representative, L. S. Ligon, Greenville, S. C.

EFFICIENCY *That Can't be Matched!*



THE TYPE L LOOM BOBBIN STRIPPER FOR RAYON & SILK QUILLS

A sudden increase in business affects departments all along the line. Overall efficiency suffers if there is a hold-up of any vital step in production.

Terrell engineers have made unbelievable progress in the last few years in developing a bobbin stripper that is adaptable to YOUR needs. From standard parts, The Type L can be assembled to handle your quills safely—at a recommended speed of 125 to 140 quills per minute. Improved safety features eliminate the possibility of damage to barrel or finish—thus reducing weaving seconds due to broken or frayed filling.

If you want maximum cleaning economy with greater efficiency, get full particulars on the TYPE L now.

The **Terrell Machine Co.,** *Inc.*
CHARLOTTE, N. C.

James F. Notman, Needham, Mass.....N. E. States
E. W. S. Jasper, Inc., Elizabeth, N. J....Penn., N. J. and N. Y.
Geo. Thomas & Co., Manchester, Eng.....European Agt.

goes into effect Nov. 15 provides for reduced duties on wools only when not finer than 44s.

Alumni Association of the Philadelphia Textile School will hold a fall rally at Kuglers' Restaurant, Philadelphia, Pa., on Nov. 20 at 6:30 p. m.

Knitted defense articles of several types are available for inspection by members of the Western District of Knitted Outerwear Manufacturers' Ass'n. at the association's office in Milwaukee, Wis. Included are Army gloves, toques, turtle-neck sweaters, sleeveless pullover sweaters; Navy watch caps; and CCC pullover crew-neck sweaters.

Textile Market Activity Is Erratic

Cotton goods swung from days of heavy activity to periods of zero trading during October. The artificial stimulus of price ceilings produced the sharp swings as buyers started to take advantage of a momentary condition or as sellers withdrew from the market entirely. The new flexible price ceiling on cotton gray goods contains features which the trade believes will result in considerable changes. The premium formerly permitted on feeler-made broadcloth appears to have been dropped in the new system, and unless the mills can get a reasonable premium it is probable that they will drop this fabric from production. The permission to establish price at a later date is an interesting and possibly useful provision which may permit buyers to average price on long-term contracts.

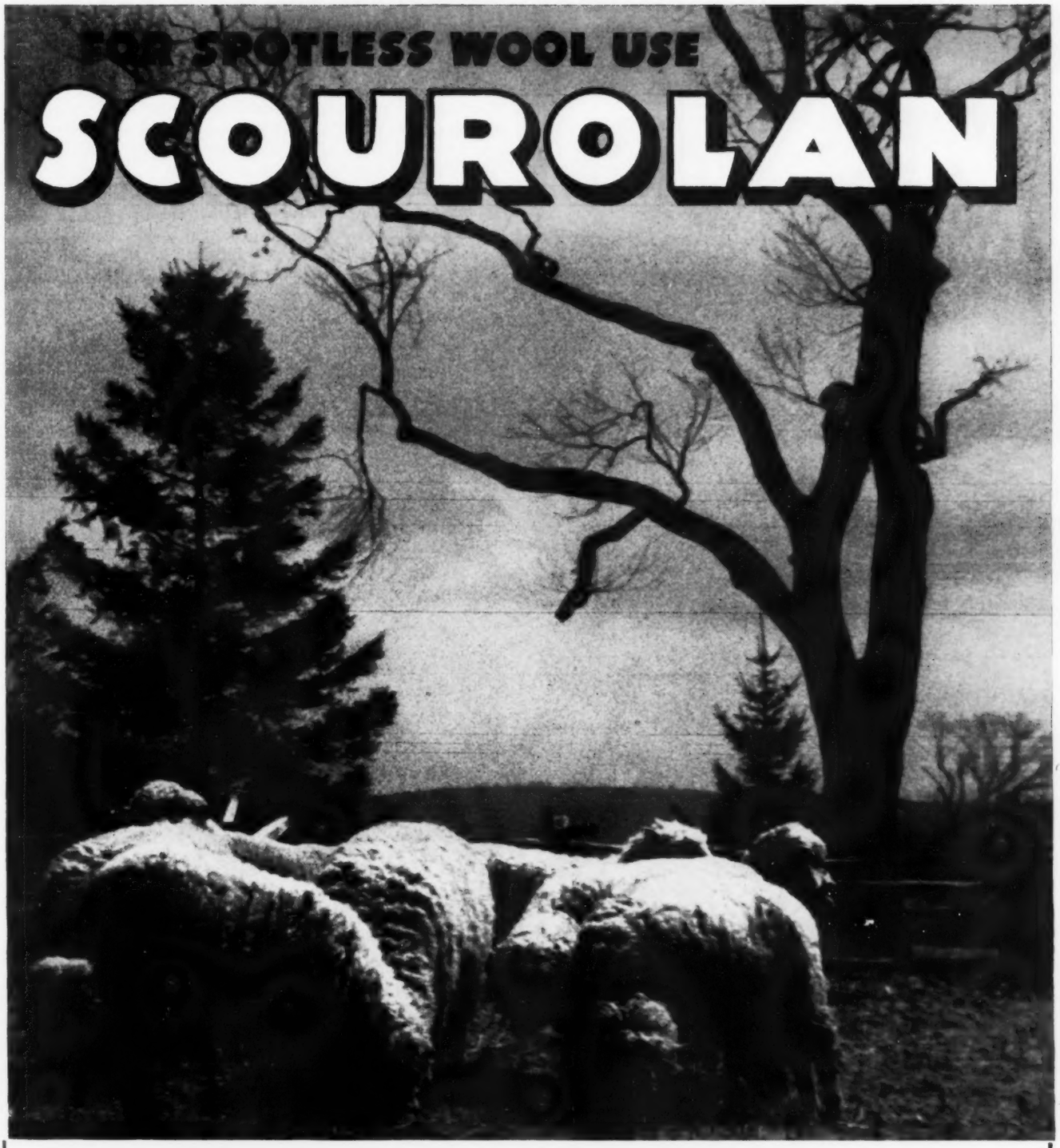
Wool goods on the New York market tightened materially following the unexpected and large calls for army goods totalling some 33,000,000 yds. late in October which was additional to the large quantities previously bought late in September. Most mills are probably booked through January and they are reluctant to tie themselves up with additional civilian business. The new method of secret opening of bids and negotiation of orders set mills to thinking that some business may have to be taken at unexpectedly low prices and that consequently they may be forced to get higher figures from the civilian side of their trade. Knitted overcoatings are interesting the clothing trade for next fall.

Rayon manufacturers are fearful that their distribution will be still further taken out of their hands by the Government. Already certain percentages have been allocated to the hosiery trade and other silk-using industries because of the freezing of silk stocks. It is now believed that there may be a diversion of about 20,000,000 lb. of rayon to Latin American countries under the Good Neighbor program. Style importance of rayon fabrics is likely to increase with the spring season, but shortages of various yarns is disturbing.

Hosiery manufacturers are now fairly well organized on their new lines, but the puzzling combinations of Nylon and rayon and lisle and silk will probably prove confusing to the retail trade for many months to come. This is obviously a transitional period and the progressive hosiery manufacturers are offering all reasonable combinations with the hope that some concentration of demand will develop later on to clarify the situation. Business in half hose has been somewhat quieter. Mills with men's wool numbers are weighing the matter of openings for fall 1942.

Underwear mills remain well sold ahead and for the most part each has mapped out its spring business by allotting certain quantities to each regular customer. The price situation is well stabilized and buyers have taken up available goods without criticism.

Outerwear mills generally have completed showings for spring. It is a seller's market and there is little difficulty in moving what is available in the various lines.



1. Used with soap, it saponifies oil, grease and dirt from any source and carries it off in the rinse.
2. It eliminates gummy handle, disagreeable odors, clouds and streaks.
3. It promotes bright, snappy shades.
4. It requires no mixing; just dip from original container, dilute with water or scouring soap, and spread across the washer.
5. It saves time at the perch.
6. It greatly reduces allowances because of spots.

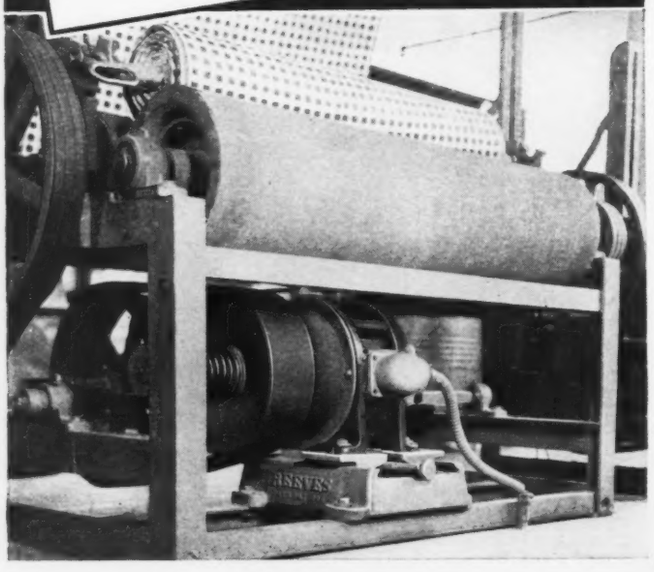
FULLITIN—A Worthy Campanion of SCOUROLAN

1. Its mild, mellow action prevents wrinkles, stuck places and whiplashes.
2. Quickly saponifies wool oils.
3. Used without soap, it eliminates the soap boiling operation.
4. Used with soap it prevents congealing, thus permitting the soap to be used cold.

Send for circular, "How BISCHOFF Aids the Textile Finisher".

ERNST BISCHOFF COMPANY · INC.
Founded 1908 Ivoryton · Connecticut

Wind Any Kind or Weight of Cloth



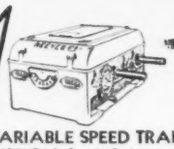
— Evenly and at Correct Tension with REEVES SPEED CONTROL

Accurate speed control of cloth winding is provided on this winder by the REEVES Vari-Speed Motor Pulley, which provides complete speed adjustability over a 3:1 ratio. As the roll builds up, winding speed is decreased in exactly the proper degree to maintain uniform tension on any kind or weight of cloth.

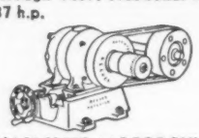
REEVES Variable Speed drives improve both the quality and quantity of textile production. No other method provides the same degree of precision and dependability. Now is the time to equip other machines in your mill with modern, compact REEVES drives. Many types of control, including highly sensitive hydraulic. REEVES Speed Control specialists, seasoned in textile applications, are at your service. Write us.

REEVES PULLEY COMPANY
Dept. W Columbus, Indiana

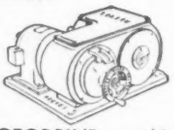
3 BASIC UNITS



VARIABLE SPEED TRANSMISSION for infinite speed control over wide range—2:1 through 16:1. Fractional to 87 h.p.



VARI-SPEED MOTOR PULLEY for application to shaft extension of any standard constant speed motor; 3:1 range. To 15 h.p.



MOTODRIVE—combines motor, variable speed drive and gear reducer (if needed). Speed range 2:1 through 6:1; to 10 h.p.

REEVES Speed Control

C.T.I. Holds 15th Annual Meeting

(*Continued from page 79*)

Wage rates have been increased—both the legal minimum and wages over all." Senator George pointed out that cotton goods must be consumed in substantial volume in the United States for cotton to remain the living of over 2,000,000 southern cotton farmers. "The rich and the poor alike must wear cotton." He approved increased farmer income which did not arbitrarily increase the price of cotton goods. In analysing the tax situation under the new bill he said, "The American people will be either made or broken by what happens in the nature of private enterprise activity, which will be largely controlled by the tax processes."

Everett R. Cook, cotton merchant of Memphis, pointed out that there must be sound and permanent prosperity for the cotton farmer and manufacturer together. "Cheap cotton certainly cannot make a healthy cotton industry," he said. "If we do not have sufficient markets, we will all go down together." He discussed the domestic market for established uses, the domestic market for new uses through research, and the foreign market. In the last named he found most hope, and urged expansion of semi-governmental credit facilities and steady work on efficiency of production. He advised that problems be faced as a united industry and that this industry should prepare now to be properly represented

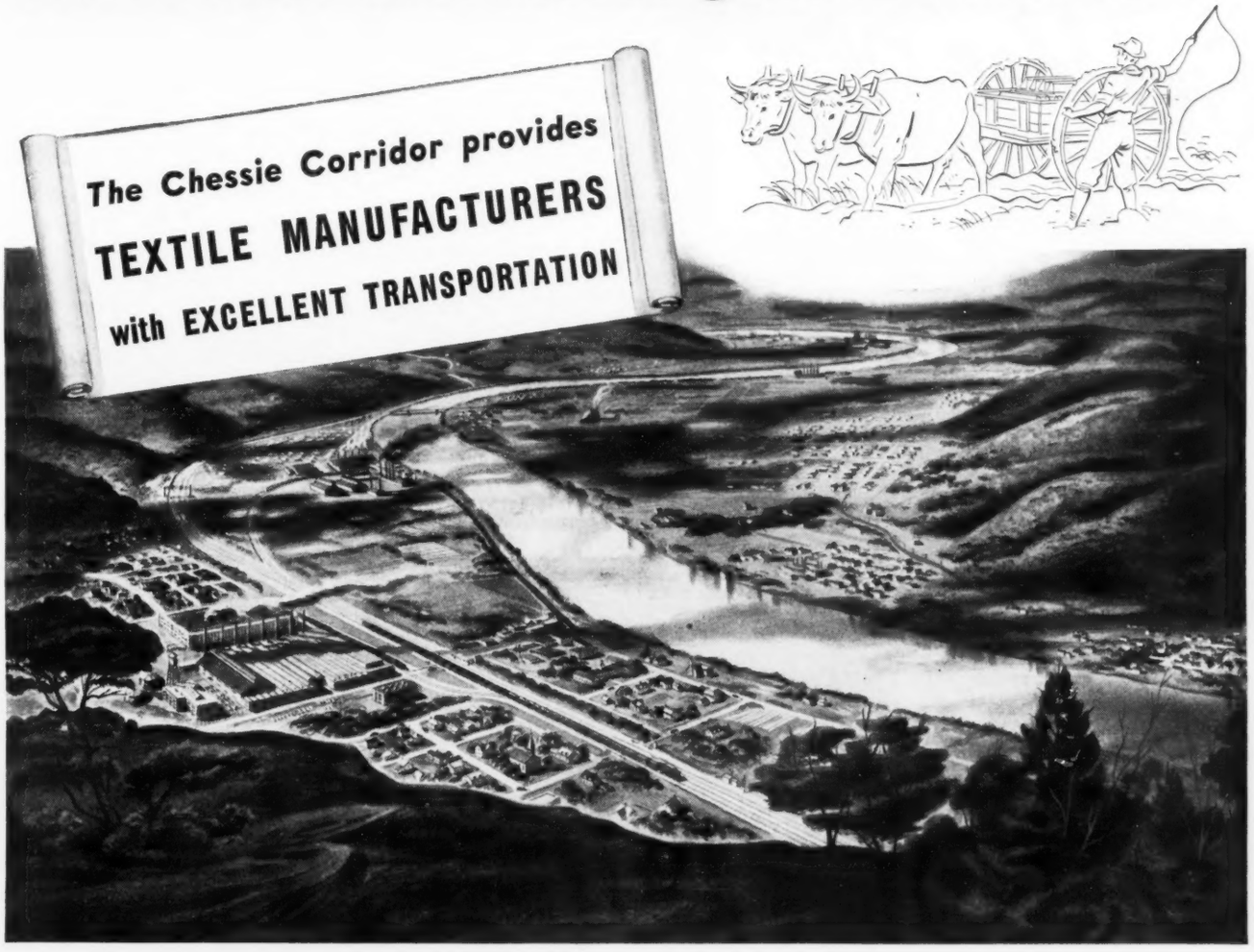
AT HEAD TABLE—In center is W. N. Banks, toastmaster for the banquet and later elected a vice-president of the institute. At left is C. T. Murchison, and at right, O. Max Gardner

in the world trade conferences which are sure to follow the war so that the voice which speaks for cotton will be heard.

Prof. J. N. Lipscomb, director of the Bureau of Agricultural Economics, Mississippi State College, Starkville, Miss., gave some common sense views on the cotton problem. He pointed out that cotton consumes more labor per acre and produces more gross value per acre than any other general use to which cotton land can be put. "By diminishing our production and pegging world prices through loans to our farmers," he said, "we have stimulated production of cotton in foreign lands. . . . The cotton farmer wants a price and volume of cotton which will enable him to have a standard of living commensurate with that of other occupational groups so long as that price does not exceed the equivalent of free trade buying power on the world's markets. . . . The farmer expects to work for his living and to respect the same right and duty of other groups."

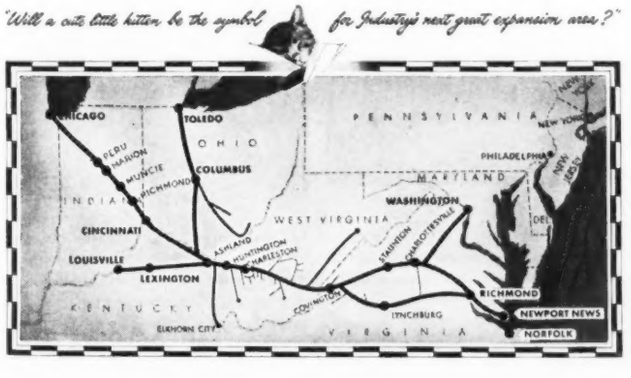
At the meeting of the directors the following officers were elected: G. H. Dorr, chairman of the board; C. T. Murchison, president; A. H. Crossman, Utica & Mohawk Cotton Mills, Utica, N. Y., vice-president; Wm. N. Banks, Grantville Mills, Grantville, Ga., vice-president; Paul B. Halstead, secretary-treasurer. All were reelections except Messrs. Crossman and Banks, who succeed Chas. F. Broughton and Fred W. Symmes.

Where oxen once moved goods to market . . .



TEXTILE mills in *The Chessie Corridor* are strategically located for profitable operation . . . close to basic raw and processed materials . . . served by fast, scheduled freight trains of Chesapeake and Ohio Lines that bring major textile markets within first to third morning delivery range.

This excellent rail service works economically in both directions, for it also draws quickly upon the wealth of mineral and agricultural resources available *within The Corridor* and in adjoining territory. Manufacturers of the chemicals, oils, dyes and synthetic fibers you need are your *Corridor* neighbors. Fuels and pure water are abundant—at the very doorstep of textile mills. Native-born labor, much of it trained in textile work, is plentiful. Acreage on waterways is available. In fact, there's practically *everything* your business needs . . right here!



THE COMPLETE STORY

of this important area is published in a beautiful book you'll be proud to have in your library —"The Chessie Corridor . . . Industry's Next Great Expansion Area." This is a graphic survey of the resources, conditions and opportunities that beckon industry to *The Corridor*. Copies will be mailed to textile executives requesting them from INDUSTRIAL DEVELOPMENT SERVICE, Chesapeake and Ohio Lines, Huntington, W. Va.

THE CHESSIE CORRIDOR ★ *Served by CHESAPEAKE and OHIO LINES*

—a bath would kill him!

When Old Man Trouble makes his presence known in your dye house or finishing plant—look to your water supply! Often a "bath" of pure, 100% soft, clear, iron-free water will completely obliterate him.

HUNGERFORD & TERRY WATER PURIFICATION SYSTEMS

produce exactly that kind of water at a cost of only a few cents per thousand gallons. Water that assures better fabric, brighter colors, closer dye matching, whiter whites and holds waste down to the minimum.

To determine whether or not your water supply is causing you trouble and expense we will make an impartial survey without fee or obligation. If a purification plant is indicated our estimate of your requirements will be included in the survey. No "sales pressure" is included in H. & T. engineering service. Write us today.

• • •

HUNGERFORD & TERRY, INC.

WATER PURIFICATION PLANTS DESIGNED INSTALLED *and* GUARANTEED

CLAYTON, NEW JERSEY

1941 Red Cross Roll Call

Ernest K. Halbach again heads dyestuffs group in drive

Ernest K. Halbach again heads the Dyestuffs Group in the 1941 Roll Call of New York Chapter, American Red Cross. Urging support of the Red Cross activities, he issued this statement:

"By supporting the Red Cross in this year's Roll Call, one can make a definite contribution to national defense. Red Cross workers serve at all military and naval stations, giving aid to the personnel, while in home communities they help needy families of service men.

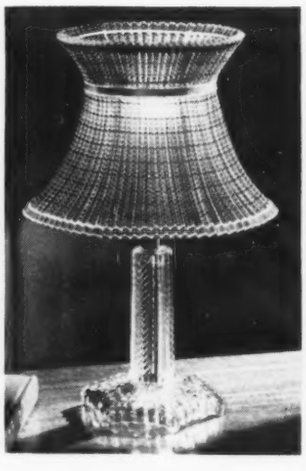
"New York Chapter provides blood plasma to the Army and Navy for transfusion use. It makes surgical dressings for the armed forces. The Red Cross obtains nurses for the Army and Navy. The Chapter trains nurses for nonprofessional service in hospitals. This year the Chapter also instructed 13,000 New Yorkers in first aid, 15,000 in water safety, 4,500 in home nursing, and 1,125 in nutrition.

"By and through the Red Cross $47,087,000 in war relief has been shipped overseas. New York Chapter alone provided 360,479 garments and 1,440,454,000 surgical dressings; helped 15,000 New Yorkers seek word of 34,000 relatives in 51 war-affected countries; forwarded 9,000 orders to deliver food packages to war prisoners in German camps; its disaster canteen fed 1,500 child refugees arriving here.

"All this was in addition to the usual help to needy veterans and nurses. The Chapter's volunteers transcribed Braille for the blind; served in hospitals; distributed magazines to patients; carried poor patients to clinics; maintained a disaster relief service.

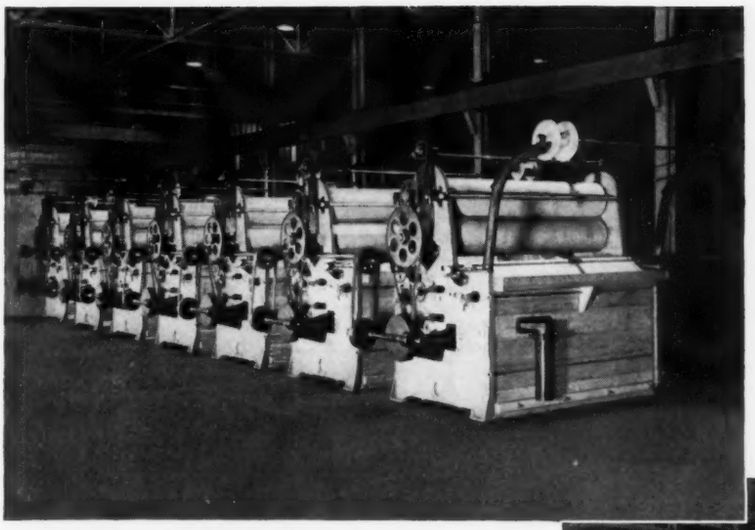
"Red Cross activities are maintained by voluntary contributions. This year, in order to carry on its national defense activities, the American Red Cross needs two-and-a-half times as many members as in 1940. I urge all to join during this Roll Call, Nov. 11 to 30."

WINNERS IN MODERN PLASTICS COMPETITION



LEFT: Top Award in the General Housewares Classification of the Sixth Annual Modern Plastics Competition was won by Rosenstein Bros., New York, for their new Rexenite fabric woven from extruded Tenite threads. The Tenite thread, in a wide range of colors, extruded on John Royle & Sons' machines by The Rex Co., Inc., and woven by Rosenstein Bros., is extraordinarily strong and resilient. It is shown above fashioned into a lamp shade.

RIGHT: A pastel-toned curtain sparkling with Vinylite, designed by the Dorothy Liebes Studios, San Francisco, won a top award in the General Housewares Section of the plastics competition.

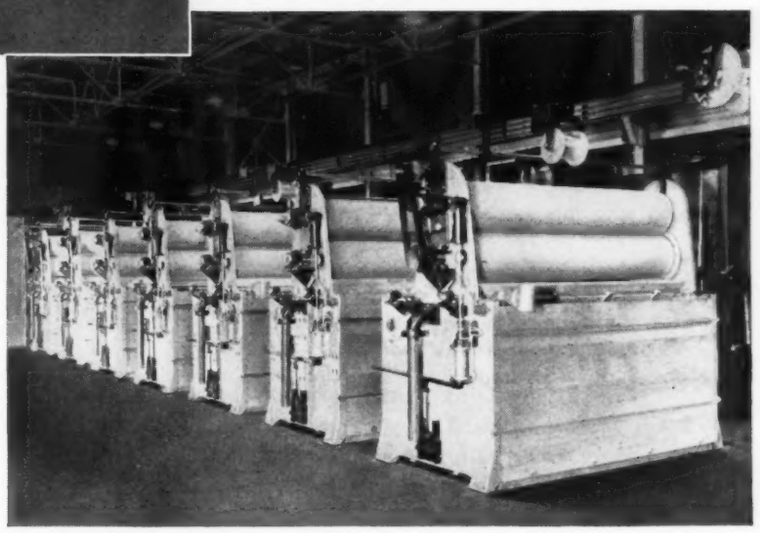


FEED END

This is the

CONTINUOUS WASHER FOR HIGH SPEED RANGE OPERATION

DELIVERY END



. . . Affords Scouring Speeds up to 45 Yards per Minute on Wide Range of Fabrics

THE new Hunter Continuous Cloth Scouring Unit as illustrated above, differs from all other known continuous washers. It may be operated either as a continuous range or as seven individual Cloth Washers which may be used all at one time with seven or more different loads, or as few or as many bowls as may be required.

For complete details covering cost and savings, you are cordially invited to write to

JAMES HUNTER MACHINE COMPANY

FOUNDED 1847 • NORTH ADAMS, MASSACHUSETTS

Western Representative: **E. G. PAULES, 343 Bendix Bldg., Los Angeles, Calif.**

CHECK THESE

COMPARATIVE YARN-CONDITIONING COSTS

Below are actual cost figures from a New England cotton mill comparing its old method of yarn conditioning with the modern "H-W" method.

BEFORE INSTALLATION OF "H-W" CONDITIONER

Steam consumption approximately 735 lbs. per hour at 56¢ per thousand times 78 hrs. equals	$31.92
5 hp. motor equals 3.73 kw. per hour at 1¢ times 78 hrs. equals	3.20
Total weekly cost	$35.12

AFTER INSTALLATION OF "H-W" CONDITIONER

Steam consumption 49 lbs. per hour times 78 hrs. equals 3,222 lbs. per week times 56¢ per thousand equals	$2.13
1/3 hp. motor 250 w. times 78 hrs. equals 19.5 kw. at 1¢ equals	.20
Total weekly cost	$ 2.33
SAVING: Net weekly saving	$32.79

While the above is a typical case, costs vary in different mills and savings will vary accordingly. We have comparative figures from other mills which are available on request. Furthermore we shall be glad to estimate the savings possible in your own plant, without obligation!

"H-W" Conditioners and Twist Setters are applicable to all textile fibers—cotton, silk, Nylon, rayon, other synthetics, worsted, woolen, and all combination yarns.

THE INDUSTRIAL DRYER CORPORATION
STAMFORD, CONNECTICUT

NEWS ABOUT MEN

Scott Russell, Macon attorney and since 1938 executive vice-president of Bibb Mfg. Co., Macon, Ga., has been elected president of that company succeeding **William D. Anderson** who was made chairman of the board. **James H. Porter** was named vice-chairman and **A. A. Drake** vice-president and secretary at election Oct. 24.

Walter Morton has been elected secretary-treasurer of the Dunson Mills, LaGrange, Ga., succeeding **Richard Hutchinson,** retired.

Francis E. Simmons, for the last seven years research director of the Underwear Institute, New York, has been appointed chief of textile research and statistics for OPM, Washington. Before joining the Underwear Institute, Mr. Simmons had eight years of Washington experience with the Department of Commerce. He was for several other years business and financial correspondent in Washington for the *Providence Journal*.

Harry L. Bailey, president of Wellington Sears Co., New York, has been nominated to become a trustee of the Bank of New York, New York. Mr. Bailey is an executive of a number of textile concerns, and is on the directorate of several insurance companies and banks.

David Snyder, executive director of the Cotton Thread Institute, was guest of honor at a testimonial dinner late last month to celebrate his 25 years of service to the thread industry. **Joseph Pollack** of Max Pollack & Co., was toastmaster.

James Park Grey of Grey Hosiery Mills, Bristol, Va. has donated a library building to Davidson College. It will be known as the "Hugh A. and Jane Park Grey Memorial Library," in memory of Mr. Grey's parents.

Nathan H. Press has been acting secretary of the Ribbon Silk & Velvet Association, New York, for the rest of the year, to fill the vacancy caused by the resignation last month of **David Hirsch.**

Louis A. Wagner, a veteran of the hosiery field, has become a member of the seamless hosiery division of Chas. Chipman's Sons Co., New York. He was for three years with T. P. Cuthbert & Co., and followed this with four years with Adams-Millis Corp. In 1939 he became vice-president of Standard Hosiery Mills, and has lately been with the Standard-Century Sales Corp., following the merger of Standard with Century.

SCOTT RUSSELL, now president of Bibb Mfg. Co.

C. S. Northen, Jr., formerly assistant vice-president of Avondale Mills, Sylacauga, Ala., was elected vice-president in charge of yarn sales at the annual meeting Oct. 16. **J. W. Solomon,** also formerly assistant vice-president, was named vice-president in charge of cloth sales. The other officers were re-elected.

Deane H. Morrison, president of New Hampshire Manufacturers' Association, has appointed a priorities committee for New Hampshire industry, with headquarters at the association's offices at 83 Hanover street, Manchester. **R. L. Thompson** of Sulloway Mills, Franklin, represents the hosiery industry; **W. W. Edwards** of the Franklin (N.H.) Mills, represents the textile industry, and **S. R. Goldman** of Milford Textile Corp., Milford, represents the jute interlining industry.

Ernest L. Taylor, formerly assistant superintendent of J. E. Millett Corp., Gilman, Vt., is now assistant general foreman of E. W. Twitchell Corp., Philadelphia, Pa., and Maple Shade, N. J.

Ernest H. Hart recently with National Dyeing & Finishing Co., has joined the sales organization of Aspinook Corp., in the New York market, to solicit business for the Lawrence (Mass.) Print Works Division of that company.

H. I. Briggs of John F. Street Co., Philadelphia, has been elected chairman of the board of the Association of Cotton Yarn Distributors. This Association held its 25th annual meeting on Oct. 7 and re-elected **Frank E. Slack** as president.

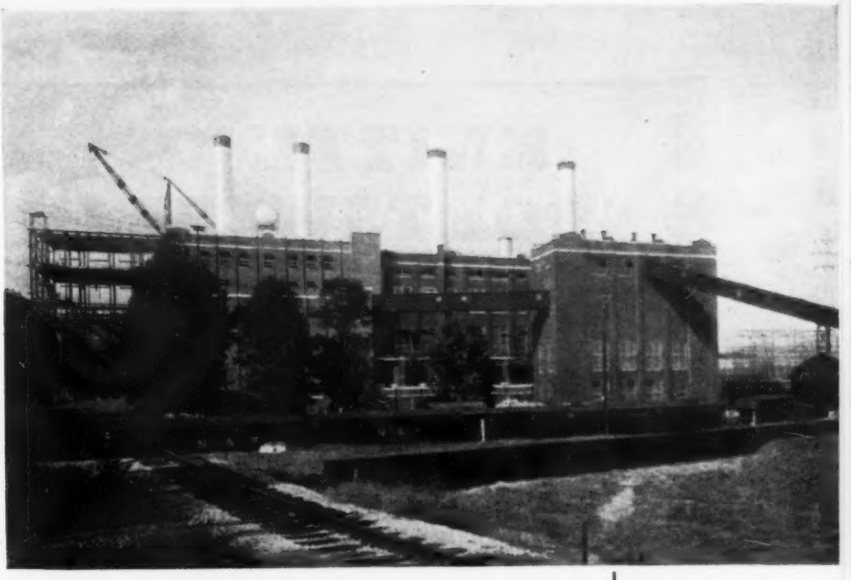
PREPARATION FOR

POWER DEMANDS

of

)OMESTIC & INDUSTRIAL

CONSUMERS



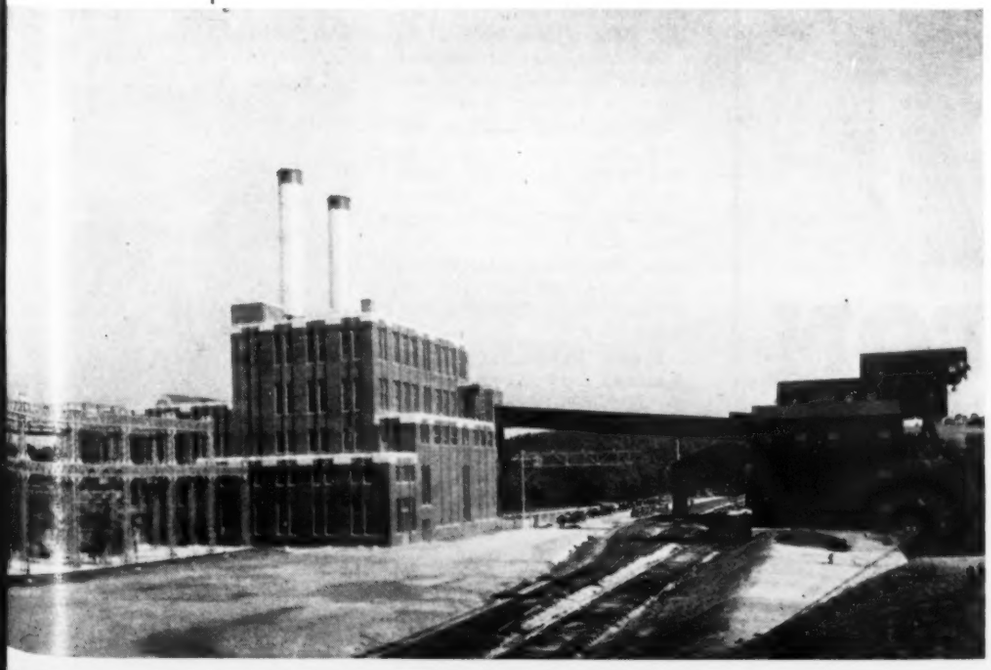
BUCK STEAM PLANT
190,000 KILOWATTS.

WATER POWER IS VARIABLE

AND REQUIRES STEAM

INSURANCE

CLIFFSIDE STEAM PLANT
80,000 KILOWATTS



DUKE POWER CO.

CHARLOTTE, N. C.

KNITTING SPORTSWEAR?

1890 to 1910

1910 to 1941

These two pictures afford some opportunity to check up on the progress through the years of the famous Leighton principle of knitting.

Our equipment and experience insure quality machines for knitting excellent garments in various weights, styles, and patterns.

Especially adapted for outerwear.

Some of Leighton's well known features:—

Unexcelled plaiting.

Variety of weights without changing needle cuts.

Minimum machine changes and adjustments.

Constructed to meet rapid present day styles changes.

Leighton Machines are being used to secure Government Contracts for watch caps, sweaters, and other Army and Navy garments.

• *68 Years Experience* •

LEIGHTON
MACHINE COMPANY
Manchester, New Hampshire

Est. 1873 Inc. 1894

NEWS ABOUT MEN

George Lanier, Jr., son of the president of the West Point (Ga.) Mfg. Co. has been appointed assistant to **Frank Walton,** chief of the textile branch of OPM, Washington, D. C. Mr. Lanier's work will be to coordinate dyeing and finishing plants with dyestuff manufacturers in connection with the needs of the defense program.

Robert S. Dempsey, for 17 years with McCampbell & Co., New York, and more recently with Stevenson, Jordan & Harrison, has joined the textile division, OPM, Washington, D. C. associated with Civilian Allocations.

Chas. D. Green has resigned as treasurer of Laurens (S.C.) Mills, and become manager in charge of production of all of the units of Mills Mill, with headquarters in Greenville, S.C.

Burton E. Oppenheim has been appointed executive assistant to L. I. Rosenwald, chief of Bureau of Industrial Conservation, OPM, Washington, on loan from Department of Labor where he was director of the Industry Committee Branch of Wage and Hour Division.

Textile Men in Armed Services

CAPT. H. C. ROBERTS

Herbert C. Roberts, for 15 years connected with E. F. Houghton & Co., has been called to active service as a Captain with the Chemical Warfare Service, and is stationed at Fort Eustis, Va. Captain Roberts has been a frequent contributor of technical articles appearing in the columns of TEXTILE WORLD.

Lt. Harry Schneider has been discharged from active duty in the army after a year's service with the Armored Force division, and is now back with Heineman & Seidman, New York. Lt. Schneider is a graduate of the Armored Force School at Fort Knox, Tex.

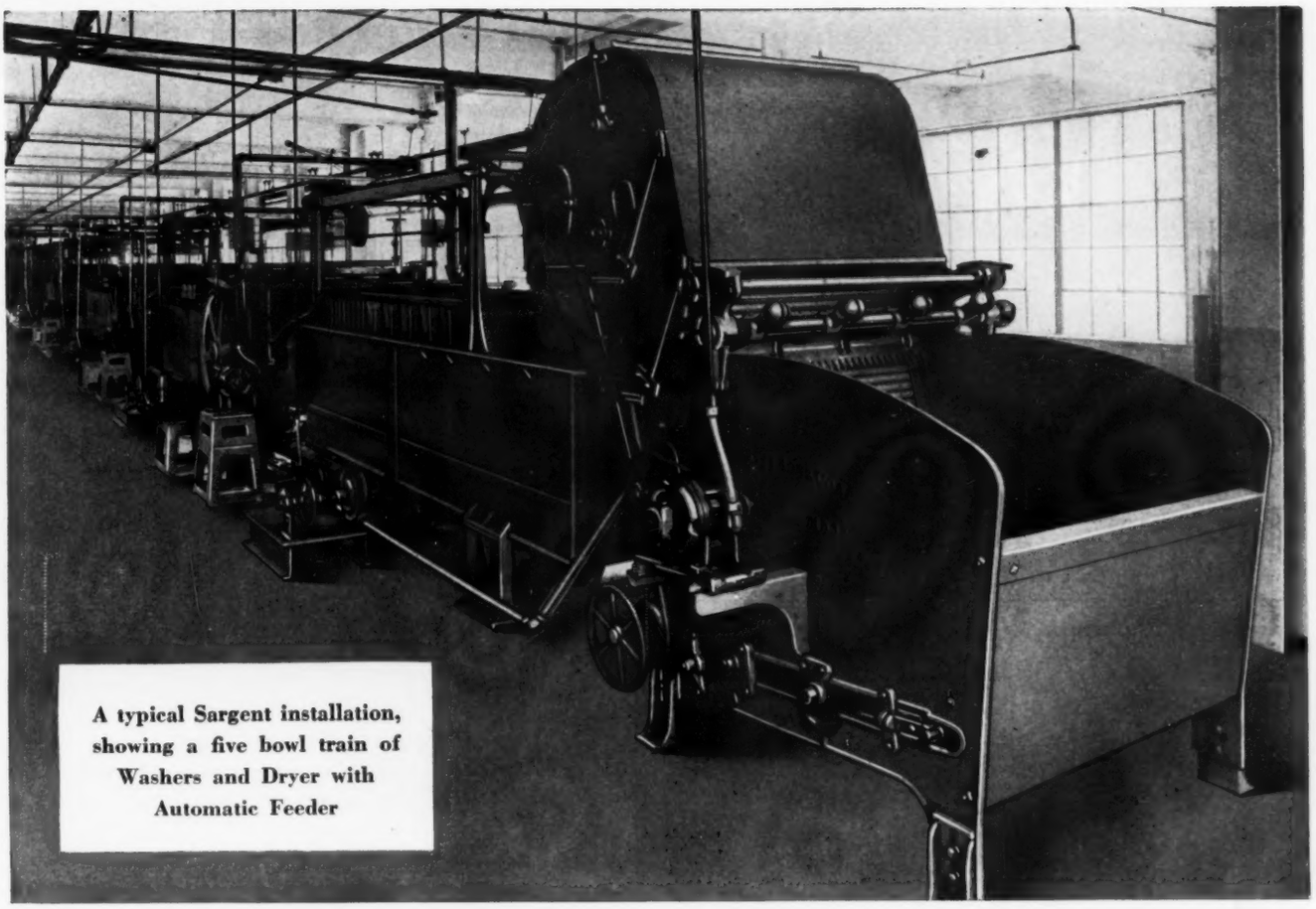
Frank Devlin, of William Whitman & Co. is attached to the Medical Corps at Camp Lee, Va. **Chester A. Strodl,** also previously connected with the Whitman Co., is attached to Quartermaster Corps at the same camp.

Robert S. Cohen, associated with the Albert H. Vandam Co., cotton converters, New York, has left for defense training in fabric analysis and inspection, at the North Carolina State College, Raleigh, N. C.

W. F. Kurfees, vice-president of Joseph T. Ryerson & Son, Inc., Chicago, has been ordered to active duty in the U. S. Navy. He left for Washington to take charge of the Steel Division of the Bureau of Ships, Navy Department. During the World War, he served as a lieutenant on the U. S. destroyer Porter and continued his association with the Navy in the Reserve Force with the rank of Lieutenant-Commander.

Lieutenant Charles R. Long, who has been the district engineer for the Westinghouse Lamp Division of Westinghouse Electric & Mfg. Co., at Atlanta, Ga., has been called up for active duty as instructor at the Coast Artillery Training School at Fort Monroe, Va., commencing Oct. 13.

LIEUT. WALTER D. LOWELL of Max Pollack & Co., mentioned in this column last month

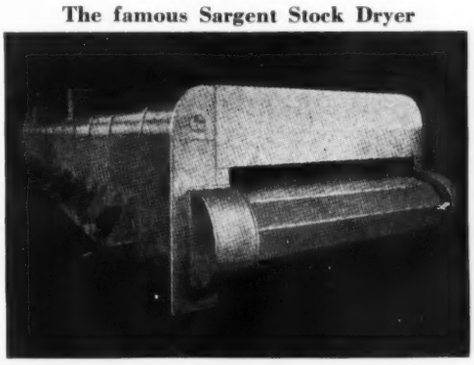


A typical Sargent installation, showing a five bowl train of Washers and Dryer with Automatic Feeder

Ushering in the NEW in "New Era"

THAT is just what the Textile Industry is experiencing when the latest types of SARGENT Preparatory Machinery are installed, because, wherever this is done, there is more *efficiency,* higher *speed,* less *waste* motion, larger *production* and greater *profits* • The Industry absolutely *needs* the *newest* SARGENT Units in order to produce the proper quality and fill the orders *on time* • For more than 88 years SARGENT has received unending recognition as specialists in Wool Scouring, Stock Drying and Picking Equipment, and its numerous fast-working Units are in daily operation in thousands of textile plants throughout America and foreign countries • There are various illustrated Bulletins available which visualize all the Sargent products, and all you have to do is *write for them!*

The famous Sargent Stock Dryer



C. G. SARGENT'S SONS CORPORATION
Graniteville, Massachusetts, U. S. A.

"INDEX" To Better Quality Textiles

FOR Dyeing, Flameproofing	USE SOLVAY AMMONIUM CHLORIDE
FOR Dyeing	USE SOLVAY CAUSTIC POTASH
FOR Dyeing, Hypochlorite bleaching, Kier boiling, Mercerizing, Neutralizing	USE SOLVAY CAUSTIC SODA
FOR Hypochlorite bleaching, Oriental rug finishing, Water conditioning	USE SOLVAY LIQUID CHLORINE
FOR Mothproofing	USE SOLVAY PARA-DICHLOROBENZENE
FOR Dyeing, Softening	USE SOLVAY POTASSIUM CARBONATE
FOR Acid neutralizing, Degumming, Fulling, Scouring, Soap building, Softening	USE SOLVAY SNOWFLAKE CRYSTALS
FOR Acid neutralizing, Fulling, Hypochlorite bleaching, Kier boiling, Scouring, Soap building, Water conditioning	USE SOLVAY SODA ASH
FOR Dyeing	USE SOLVAY SODIUM NITRITE
FOR Acid neutralizing, Degumming, Fulling, Scouring, Soap building, Softening	USE SOLVAY TEXTILE SODA

FOR TECHNICAL SERVICE In the Solvay Laboratories, textile men with years of experience study your problems and make recommendations on the basis of laboratory findings. *Solvay will be glad to send these textile specialists into your plant to study actual operating conditions and help adapt laboratory findings to specific plant conditions.* Write today to

SOLVAY SALES CORPORATION

Alkalies and Chemical Products Manufactured by The Solvay Process Company

40 Rector Street • New York, N. Y.

NEWS ABOUT MEN

T. H. McKinney, vice-president and general manager of American Yarn & Processing Co., Mount Holly, N. C., has been drafted by the OPM to serve in its textile division in Washington in charge of all cotton yarns. He will not give up his connection with American Yarn & Processing Co.

Fessenden S. Blanchard, associated with Pacific Mills since 1913, in charge of public relations, market research, promotion and personnel, and president of the U. S. Institute for Textile Research, has been appointed textile consultant in the Bureau of Industrial Conservation of OPM in Washington under **L. J. Rosenwald.**

George A. Urlaub, until recently executive director of the discontinued Throwsters Research Institute, has been appointed to the technical staff of the OPA, in Washington, where it is understood he will cover knit goods.

Fred C. Niederhauser, with many years experience in the rayon manufacturing field, has been appointed consultant to the Textile Division of OPA, Washington.

John Shireman, divisional manager of Fashion Accessories, Montgomery Ward & Co., is to become hosiery consultant of the Textile Division of OPM, Washington, D. C.

Erle M. Brizard, for the last few years Atlanta, Ga. representative for William L. Barrell Co., has joined the organization of OPA, Washington, D. C., and will work under **James P. Davis** in matters relating to textile price ceilings.

W. Earl Bates has become secretary and assistant treasurer of Whitney (S.C.) Mfg. Co., having resigned as secretary of Green River Mills, Tuxedo, N. C., a position he had held since 1926, to accept this new position. **Douglas S. Blois,** formerly with Southern Mercerizing Co., Tryon, N. C., has succeeded Mr. Bates at Green River Mills.

W. P. Rhodes, who has been associated with the Rhodes-Rhyne Mfg. Co., Lincolnton, N. C., has been elected secretary of the company and of Elizabeth's Indian Creek Cottons, also of Lincolnton.

S. B. Roberts, chief engineer of the Celco, Va., plant of the Celanese Corp. of America, has been promoted to the head office of the corporation in New York.

Lanham McAuley, formerly with the Callaway Mills, La Grange, Ga., left Oct. 24 for Lima, Peru, where he will be assistant manager, for the next five years of the Inca Mfg. Co.'s spinning and carding department. The Inca company is owned by the W. R. Grace & Co., New York.

Charles S. Parsons has been appointed general superintendent of Hathaway Mfg. Co., to succeed **Joseph Whalley, Jr.,** who has resigned on account of ill health. Mr. Whalley had been with the firm for 31 years, serving for 10 years as general superintendent. Mr. Parsons has been in the employ of the Hathaway for more than 13 years.

James E. MacDougall, for the last eight years southern manager of Smith, Drum & Co., with offices in Charlotte, has been appointed district manager of the Priorities Field Service with offices in Charlotte. He will work under **Frank H. Cochins,** district coordinator of OPM. The field offices are under the general supervision of **L. Edward Scriven,** director of priorities field service in Washington.

Louis D. de Loach has resigned his position with Mayfair Mills, Arcadia, S. C., and is now assistant to Col. Chas. R. Baxter, agent for Southern Mills of Kendall Co., located in several towns in South Carolina and one North Carolina town.

Edmund L. Lauber of American Viscose Corp., New York, has been elected to membership on the Research Committee of National Association of Hosiery Manufacturers to assist in making the efforts of the Committee of maximum service to the hosiery industry.

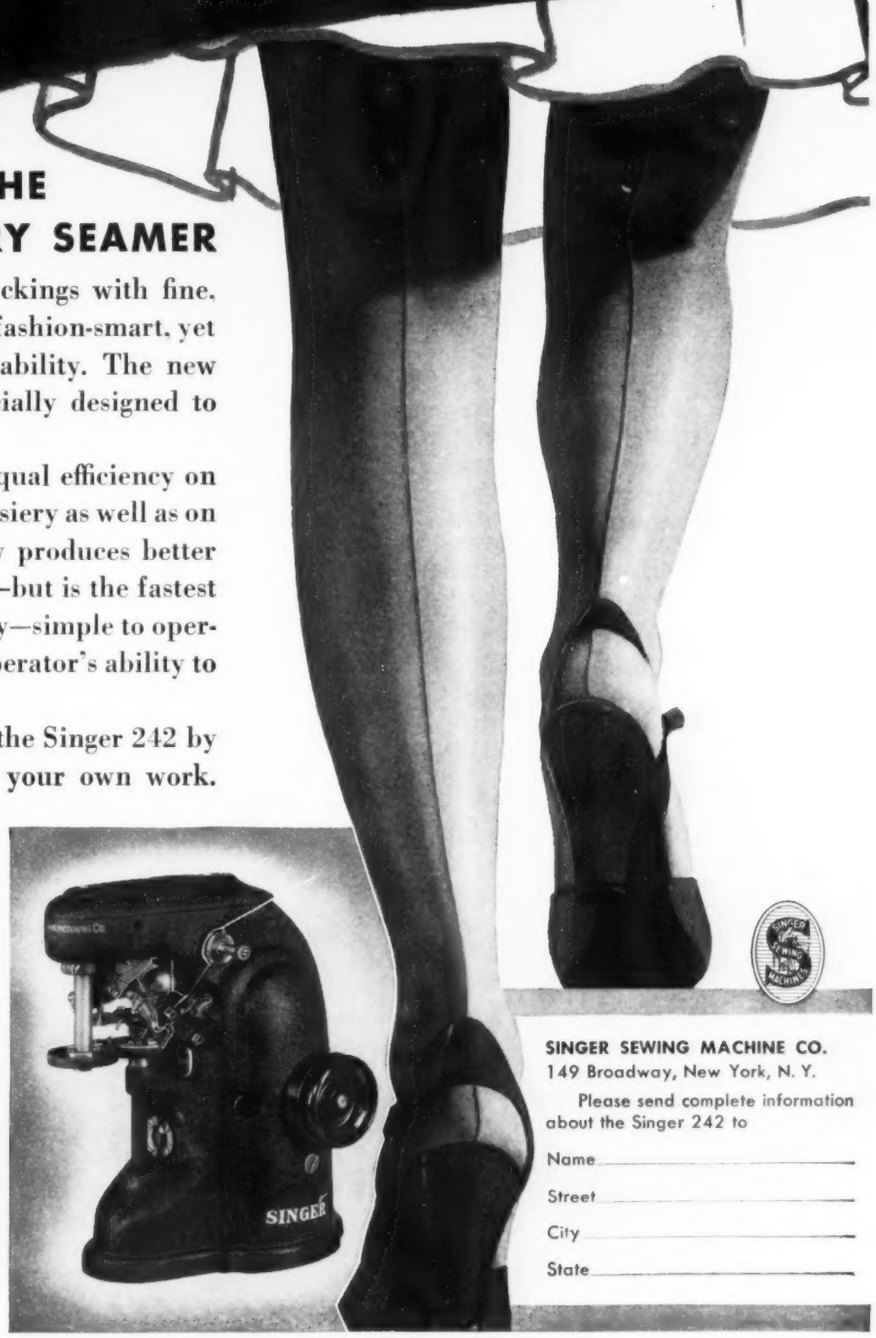
Ray Rogers, assistant superintendent of Patterson Mills Co., Roanoke Rapids, N. C., for the last eight years, has become superintendent of Hartsville (S.C.) Cotton Mills. Mr. Rogers is a graduate of the Textile School of North Carolina State College and is a son of **B. M. Rogers,** superintendent of Oakboro (N.C.) Cotton Mills Co.

R. R. Hood, office manager of Pelzer (S.C.) Cotton Mills for the last six years, resigned effective Oct. 25.

O. D. Spratlin, personnel director at Grenada (Miss.) Industries for the last year, has been promoted to superintendent of Grenada (Miss.) Hosiery Mills.

Leo J. Van Herbe and **Edgar C. Crosby** have been added to the accounting division, textile section of OPA, Washington, D. C. Mr. Crosby is textile engineer with experience in the industry and for-

Add SALES APPEAL with beautiful seams



MADE ON THE SINGER 242 HOSIERY SEAMER

All women want lovely sheer stockings with fine, straight pencil-line seams that are fashion-smart, yet have adequate elasticity and durability. The new high speed Singer 242 was especially designed to produce seams of this kind.

The Singer 242 operates with equal efficiency on the most delicate Nylon and silk hosiery as well as on wool, cotton and lisle. It not only produces better seams, which are stitched straight—but is the fastest hosiery seamer on the market today—simple to operate at speeds limited only by the operator's ability to guide the work.

Let us prove the superiority of the Singer 242 by testing it in your own plant on your own work. There is no cost or obligation. Contact the nearest Singer Shop for the Manufacturing Trade today, and arrange for your test.

SINGER

SEWING MACHINE COMPANY

MANUFACTURING TRADE DEPARTMENT

149 BROADWAY, NEW YORK, N. Y.

SINGER SEWING MACHINE CO.
149 Broadway, New York, N. Y.

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STARCHES
You Need

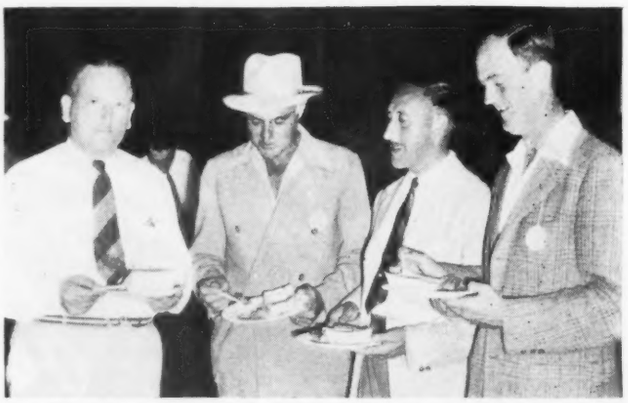
for Every
Textile Purpose

- Pearl Corn Starch
- Thin-Boiling Corn Starches
  (all fluidities)
- Corn Dextrines
  (white and yellow types)
- Corn Gums
  (for printing and finishing)
- Fiberjel "V"
  (for Filament Viscose Sizing)
- Fiberjel "SR"
  (for Spun Rayon Sizing)

Our Textile Chemists can help you obtain the results you want. Their services are at your disposal.

NATIONAL STARCH PRODUCTS Inc.

820 GREENWICH STREET, NEW YORK



FIFTEEN HUNDRED employees and friends of the North Georgia Processing Co., Inc., turned out in holiday spirit on Oct. 4, for the fourth annual field day games and barbecue. Of the total mill employees, 92% was present. In the picture above A. J. Morse, manager of the Toccoa Mill, official host on this occasion, is shown on the left, while to his right are W. R. Beldon, manager Clark Thread Co. of Georgia, Austell Mill; A. W. Babbitt, manager of the Newark Mill; S. Yale, also from Austell plant.

merly an examiner in the patent claims section of the Bureau of Internal Revenue.

Richard F. Eshleman, recently connected with the engineering department of Textile Machine Works, Reading, Pa., has joined the sales department of American Viscose Corp., New York, in connection with the company's program to expand its cooperative work with manufacturers of hosiery and other knit goods. Mr. Eshleman will act as assistant to **E. L. Lauber.**

C. S. Pierce, technician of the Army Quartermaster Depot in Philadelphia, discussed army requirements for textiles at the monthly dinner meeting of the New York Chapter of the New Bedford Textile School Alumni Association, early last month.

A. H. Wells, formerly assistant supervisor at Mills' Mill, Greenville, S. C. and **Kenneth W. Horne,** formerly assistant technician at Dunean Mills, Greenville, have joined the sales development department of American Viscose Corp., and will be located at Meadville, Pa.

F. P. Connelly has resigned as Chicago office manager of Bigelow-Sanford Carpet Co. **Carl Freyer,** lately advertising manager, has been appointed to a newly-created position as midwestern office manager. Mr. Freyer will have his headquarters in Chicago. **T. Rantoul** has been appointed advertising manager to succeed Mr. Freyer.

Robert W. Dugan has resigned from the weaving department of M. T. Stevens & Sons Co., Franklin, N. H., to become overseer of weaving at Tilton (N.H.) Worsted Mills.

D. C. Woods has resigned as president of the Rollins Hosiery Mills, Des Moines, Ia., and he has been succeeded by Laurance Mayer of New York. **Joseph Rosenfield,** a Des Moines attorney has been named to succeed Mr. Woods on the Board of Directors. Mr. Mayer, associated since 1910 with Julius Kayser & Co., and since 1921 vice-president of that company, has resigned that post to take his new connection with Rollins.

Bartow H. Underhill, promotion manager of Pacific Mills, New York, has been appointed advertising manager of the Cotton and Rayon Division, succeeding **F. S. Blanchard,** now with OPM in Washington.

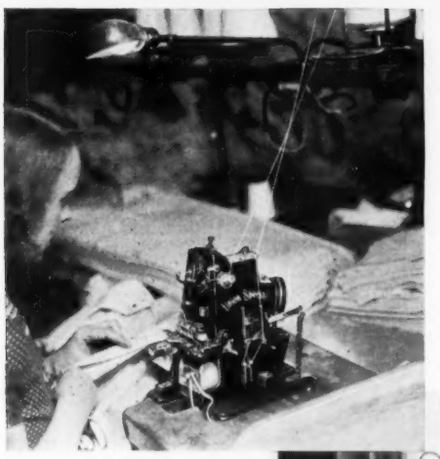
Captain Ellison A. Smyth, textile pioneer, and until recently president of Balfour Mills, celebrated his 94th birthday on his estate at Flat Rock, N. C.

Robert Zeuren has become agent of Davan Dye Co., West Warren, R. I. He was formerly with Hind & Harrison Plush Mills, Clark Mills, N. Y.

William Forest, formerly associated with Hathaway Mfg. Co., New Bedford, Mass., has been named superintendent of the weaving department of Atlantic Mills, Inc., which has opened a new plant in the former Booth Mill building, for manufacture of rayon piece goods.

Fred Neaves, who has been with the Chatham Mfg. Co., Elkin, N. C., since 1920, and for the last 5 years superintendent of spinning and carding, has been promoted as assistant to **Raymond Harris,**

CLOTHING FOR AN ARMY



Above—Union Special Lockstitch machines working on Army pants at Waverly Garment Co., Waverly, Tenn.

Left—Blind hemming Army undershirts on Style 39200AS at Munsingwear in Minneapolis.

Below—Making Army field caps with Class 51400, 39200, and 61300 machines at Mid City Uniform Cap Co., Chicago.

ABILITY of American manufacturers of clothing to produce a vast amount of apparel has long been one of the wonders of the industrial world. BUT THIS WAS SOMETHING DIFFERENT! *An Army had to be clothed*—not just with one uniform, but with several complete outfits for immediate use and for reserve, plus numerous special garments for an Army grown highly technical.

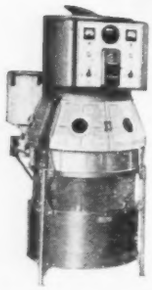
Few manufacturers had ever seen the garments on which they were invited to bid. How could estimates be made of the time . . . the equipment . . . the machine operators required? Would situations arise that would make it impossible to deliver the goods on time?

Fortunately, many of these questions had already been anticipated. Union Special executives had participated in national group conferences on the subject. Production specialists had worked out specifications. And the Union Special factory was already producing the special machines needed for numerous operations. As a result, many manufacturers, bidding on Defense garment contracts, soon discovered what others have long known: *When you have a production sewing problem, it pays to call Union Special!*

We will be glad to receive your inquiries. Call our nearest office, or write to UNION SPECIAL MACHINE CO., 432 N. Franklin St., Chicago, Ill.

UNION SPECIAL

Watch Your Step! PRIORITIES Cause SUBSITUTIONS

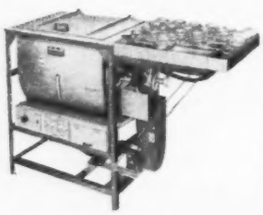


Substitutions are commonplace these days. Government priorities and material shortages leave the manufacturer little choice in the matter. He must use what he can get.

The substitute may be just as good as the original — and then again it may not. But you can't afford to take any chances. You *must know*.

AND YOU CAN KNOW—DEFINITELY —WITHOUT WAITING

ATLAS FADE-OMETER will show you within a few days the effects of months of June Sunlight on colors and fabrics. And so accurate and dependable is this test that it meets the requirements of the U. S. Bureau of Standards and the A.A.T.C.C.



ATLAS LAUNDER-OMETER reproduces the effects of months of commercial launderings on colors and textiles, and their reaction to soaps and detergents. It has been adopted as standard by the A.A.T.C.C.

Be Wise—Be Safe—Be Sure

Depend upon ATLAS OMETERS
Made only by

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FOR TEXTILE MACHINERY

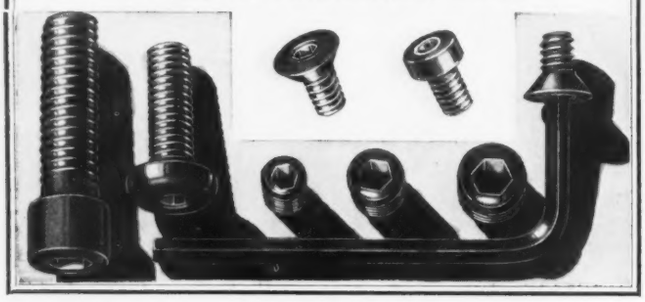
ALLEN

HOLLOW Hex Socket SCREWS

These specially-developed ALLEN Hollow Screws will cut your losses from *pulled threads*. Heads set perfectly flush with machine surfaces. No sharp edges to catch fabrics; screws are chamfered at the point, outside edge of head and top edge of socket. No slots to burr and pull threads; the internally operated hex key sets the screw easily, quickly and *tightly* without slippage.

Send specifications of diameter, length and thread or submit actual samples of screws you are now using. We will supply Allen samples developed for your particular application.

THE ALLEN MANUFACTURING COMPANY
HARTFORD, CONNECTICUT, U.S.A.



general superintendent of the company. **R. G. Boles,** for the last five years foreman of mule spinning and assistant to Mr. Neaves, was promoted to fill the vacancy left by Mr. Neaves.

J. M. Dockins, who has been in Cuba for over a year as overseer of bleaching, dyeing and finishing and the cloth room for Cia Textilera Ariguanabo, Havanna, has returned to the United States. He is living for the present at Augusta, Ga.

O. W. Bryant has accepted the position of superintendent of Cherokee Mills, Acworth, Ga., succeeding **J. A. Gorman,** who resigned.

H. Morgan Rogers has resigned as plant engineer at Muscogee Mfg. Co., Columbus, Ga., and has become superintendent of the mechanical department of Excelsior Mills, Union, S. C., a new woolen mill.

Arthur T. McElveen has become assistant superintendent of Washington Mfg. Co., Tennille, Ga. He was formerly overseer of carding at Chicopee Mfg. Corp. of Georgia, Gainesville, Ga.

George R. Kay, formerly of Greensboro, N. C., is now general superintendent of Spindale (N.C.) Mills.

W. Beaty Armstrong has accepted position of overseer of carding and spinning at Deep River Mfg. Co., Randleman, N. C. He formerly held a similar position with Stowe Mills, McAdenville, N. C.

G. W. Miller has resigned as shop foreman at Chicopee Mfg. Corp. of Ga., Gainesville, Ga., and has become superintendent of the mechanical department of Stonewall (Miss.) Cotton Mills.

W. Baker has resigned as superintendent of the mechanical department of Springs Cotton Mills, Kershaw, S. C., and has accepted a similar position with Clover (S.C.) Spinning Co.

W. T. Hunt, formerly of Lincolnton, N. C., has become overseer of Nos. 1, 2 and 3 carding at Brookside Mills, Knoxville, Tenn.

C. F. Earnhardt has become superintendent of Borden Mills, Kingsport, Tenn. He was formerly with Laurens (S.C.) Mills.

G. H. Turner has resigned as overseer of carding at Springs Cotton Mills, Kershaw, S. C., and has become general overseer of carding at Clover (S.C.) Spinning Mills.

A. B. Fletcher, formerly with Industrial Cotton Mills, Rock Hill, S. C., has become overseer of weaving at Chadwick-Hoskins Co., Pineville, N. C., unit.

George W. Ray, formerly with Chadwick-Hoskins Co., unit No. 5, Pineville, N. C., has been transferred to overseer of spinning, spooling and warping at Calhoun Mills, Calhoun Falls, S. C.

H. M. Rogers has resigned as engineer at Muscogee Mfg. Co., Columbus, Ga., and has accepted a similar position with Excelsior Mills, Union, S. C.

E. D. Newton has become superintendent of Highland Park Mfg. Co., Rock Hill, S. C. He was formerly overseer of weaving at Springs Cotton Mills, Kershaw, S. C.

Roscoe Sheridan is now overseer of spinning at Jefferson Mills, No. 3 unit, Royston, Ga.

Walter Koon, for the last two years assistant superintendent of Locke Cotton Mills, Concord, N. C., has been promoted to night superintendent of the same mills.

S. F. Davis has been promoted to overseer of third shift weaving at Jefferson (Ga.) Mills, unit No. 1.

W. Lee Jordan has become overseer of the cloth room of Flint River Cotton Mills, Albany, Ga., succeeding **J. N. Vickers,** resigned.

John Milwood has become night overseer of spinning at Clover (S.C.) Spinning Mills.

R. D. Haynes is now overseer of carding at Rockfish Mills, Cumberland, N. C. unit. He formerly held a similar position with Chadwick-Hoskins Co., Charlotte, N. C. He succeeds **C. K. Quick,** resigned.

Ralph Douberly has been appointed plant engineer of Muscogee Mfg. Co., Columbus, Ga., succeeding **H. Morgan Rogers,** resigned. He was formerly assistant.

W. R. Shores, superintendent of Rockfish Mills, Hope Mills, N. C., has resigned.

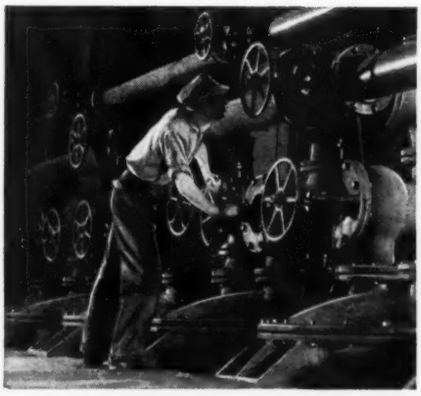
W. W. Waits has become overseer of spinning at Chadwick-Hoskins Co., No. 5 unit, Pineville, N. C. He was formerly with Calhoun Mills, Calhoun Falls, S. C.

R. F. Mills has resigned from Jefferson Mills, Crawford, Ga., and become superintendent of Winton Mills No. 1 unit, Banning, Ga., succeeding **J. M. Jordan,** resigned.

E. S. Nivens has resigned as overseer of spinning at Clover (S.C.) Spinning Mills, and has been succeeded by **Wade Hartsoe.**

Ray Rogers has become

THEY KEEP ON ROLLING...

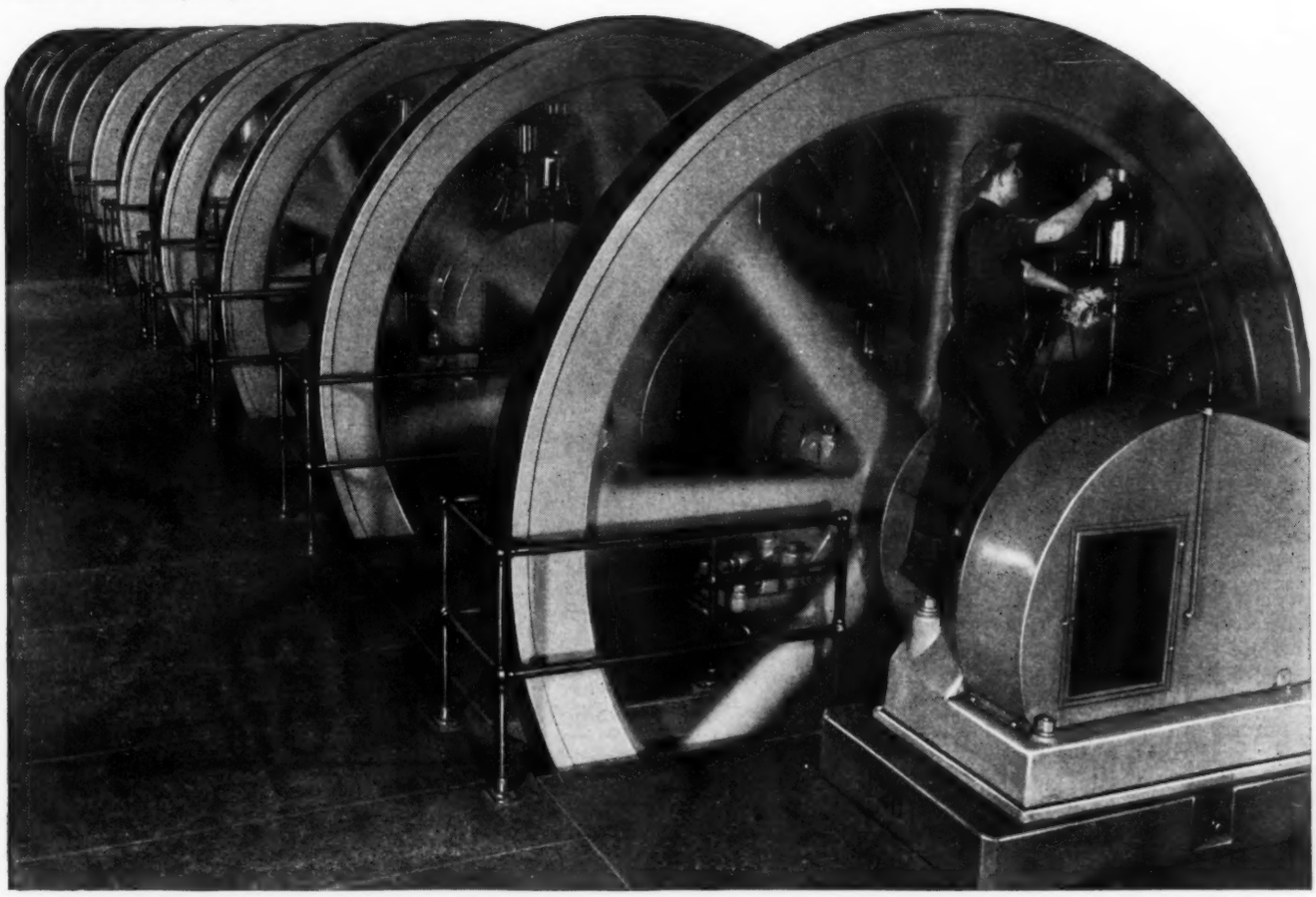


Regulating the amount of carbon dioxide that is pumped to the carbonating towers.

Gas compressors in the North Plant of Michigan Alkali, Wyandotte, Mich. These wheels turn 365 days a year.

The Michigan Alkali plants are never idle. The wheels never stop turning. As a result, production of Michigan Alkali chemical products is continuous.

Night and day, for more than fifty years, raw materials — coal, limestone and salt brine — have poured into the ovens and distillers at Michigan Alkali. And night and day basic chemical products move out over the country, filling the needs of Industry and National Defense.



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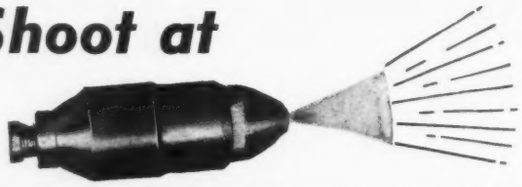

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With The RIHCO
Type B Atomizer

You're bound to make bigger profits from your mill once you start using the Type B atomizer. Since this atomizer operates on *half* as much air as ordinary heads and at lower pressure it therefore uses *less* than *half* the power. Many leading mills know that:

- Air consumption has been cut in half
- Humidifying capacity can be doubled on existing compressors
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"Our Beam Blowing Cut from 50% to 2%"

That's the report from one of the many mills that have adopted

STANZOLENE

Not only does this new formula practically eliminate blow-outs on both sulphur and direct color beam dyeing but results in a much more even distribution of clean dyed yarn without smudges. Equally fine results have been shown on packaged goods. . . . Write today for complete details and a working sample to prove our claims to your own satisfaction.

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NEWS ABOUT MEN

superintendent of Hartsville (S.C.) Cotton Mills. He was assistant superintendent of Patterson Mills, Roanoke Rapids, N. C., for eight years.

H. G. Clough has resigned as head dyer at the plant of the Hamilton Cotton Co. Ltd., Hamilton, Ont., owing to ill health. He has been with the company for the last 10 years. **Ernest Greenhalgh** has been appointed his successor. Mr. Greenhalgh was for many years head dyer at the Wabasso Cotton Co., Three Rivers, Que.

Whiteford C. Blakeney has resigned as night overseer of spinning, Springs Cotton Mills No. 1, Fort Mill, S. C., to become overseer of carding, Spartan Mills, Spartanburg, S. C.

Virgil A. Ballard has been promoted to night overseer of spinning, Springs Cotton Mills, No. 1, Fort Mill, S. C.

W. Oscar Nichols, Jr., has resigned as second hand of spinning, Springs Cotton Mills, No. 1, Fort Mill, S. C., to become overseer of spinning Hartsville (S.C.) Cotton Mills.

W. J. Crump has resigned as overseer spinning, Chadwick-Hoskins Co. Mill No. 5, Pineville, N. C., to become third shift second hand of spinning, Springs Cotton Mills No. 1, Fort Mill, S. C.

Howard L. West has resigned as overseer of carding and spinning Saint Pauls (N.C.) Cotton Mills, to become second-shift second hand of carding, Springs Cotton Mills No. 1, Fort Mill, S. C.

Leon D. Putman has resigned as overseer of carding, Borden Mills, Inc., Kingsport, Tenn., to become third shift second hand of carding, Springs Cotton Mills, No. 1, Fort Mill, S. C.

W. A. Edwards has been promoted to assistant overseer of the cloth room, Springs Cotton Mills No. 1, Fort Mill, S. C.

Dwight L. Thomas has been transferred as superintendent from Springs Cotton Mills No. 2, to Mill No. 1, Fort Mill, S. C. Mr. Thomas is succeeded at No. 2 Mill by **E. L. Cantrell.**

J. I. Efird has been appointed second-shift second hand of spinning, Springs Cotton Mills No. 1 Fort Mill, S. C.

Norman Hilditch, president of the 1941 graduating class of the New Bedford Textile School, has joined the Chicopee Mfg. Co. at Chicopee Falls, Mass., in the carding and spinning department. **Hermes Touchette,** also of the same 1941 class, is with Chicopee as assistant to the superintendent.

Obituary

Charles L. Gilliland, 67, former treasurer of Aberfoyle Mfg. Co., Philadelphia, died Oct. 22 at Phoenix, Ariz. He joined Aberfoyle in 1910 and resigned in 1935 because of poor health after 25 years as active head of the company. He made an important contribution toward the betterment of employment and living conditions among textile workers generally.

Louis Knecht, 72, president of the Walser Mfg. Co., Clifton, N. J., died at his home in Passaic, Oct. 18. He came to this country from Germany in 1893 and joined the Steel Heddle Mfg. Co. in Philadelphia where he contributed inventions to the development of the heddle. Around 1900 he joined the firm of which he was president. The concern was one of the first knitters of rayon yarns in this country.

Edwin Wilcox, 79, treasurer and co-founder of the Wilcox Lace Co., Middletown, Conn., died recently.

Sir Herbert S. Holt, 85, outstanding Canadian financier and chairman of the board of Dominion Textiles Co., and Montreal Cottons, Ltd., died at Montreal recently.

Adolph G. Velasko, 76, one of the founders of the Oak Knitting Co., Syracuse, N. Y., died Oct. 19 at his home in Tucson, Ariz. Prior to 1900 he was associated with Clinton Knitting Co.

John C. Mason, 63, Belmont, N. C., formerly an official of Imperial Yarn Mill and later associated with other textile industries, died recently.

H. S. Dunkelberger, 44, who went from Reading, Pa., in 1929 to become general manager of the Diamond Full Fashioned Hosiery Mills, High Point, N. C., died Oct. 21.

F. A. Sherrill, 82, president of the Stateville, (N. C.) Cotton Mills, died Oct. 20.

Frederick Graf, 51, a partner in the International Narrow Fabric Co., Keene, N. H., died recently. He founded the

EUTINOL

3 important functions in 1 process

NOW *one* product, EUTINOL, gives you *three* perfect print washing processes . . . a concentrated, combination fluid that *softens* fabrics, *deterges* with high-speed efficiency and does the job of *rapid wetting* all in one economical operation. You'll find that EUTINOL imparts a genuinely soft hand, makes colors more vivid and attractive, produces whites of remarkable purity.

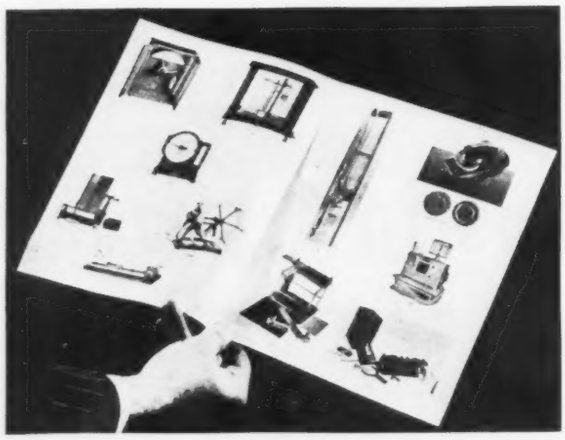
EUTINOL can be successfully used on all fibres. It rinses freely and when used with soap increases and improves its effect. EUTINOL's high cation-active softening properties *plus* its wetting and deterging qualities have been tested and *proved* by the industry. Find out today how this *three-in-one* product can aid *your* print washing.

JACQUES WOLF & CO.

Chemicals **PASSAIC, N. J.**

WAREHOUSES: Providence, R. I., Philadelphia, Pa., Utica, N. Y., Chicago, Ill., Greenville, S. C., Chattanooga, Tenn., Knoxville, Tenn., Charlotte, N. C., Milwaukee, Wisc., Columbus, Ga. Midwestern Distributor: Bradley F. Marthens, Chicago, Ill.

Approved Testing Apparatus



Just Off The Press
Yours For The Asking

This bulletin will aid you in the modernization of your testing laboratory.

ALFRED SUTER
Textile Engineer
200—5th Ave. NEW YORK

MEESE, INC.
Madison, Ind.

NEWS ABOUT MEN

firm in 1914 with Emil Grube and Ralph Reith.

A. L. Lewis, of Vought-Sikorsky Engineering Department, Bridgeport, Conn., was killed in an airplane accident at St. Thomas, Ont., Oct. 30. He was for many years sales manager of Atwood Machine Co., Stonington, Conn.

Charles Wetmore Leonard, 97, president for many years of the former Holden Leonard Co., Bennington, Vt., and for many years associated with numerous textile mills, died Nov. 2, in New York. He was associated with other industries and on the directorate of a number of banks in his active business years. Recently he had spent much time in breeding race horses.

Walter P. Jollie, a veteran Worth Street salesman, since 1908 associated with the Cone Export & Commission Co., died late last month. He was connected with the old firm of Bliss, Fabyan & Co., from 1883 to 1908. His 50th year in Worth Street was celebrated eight years ago. He was the first chairman of the Textile Square Club on its organization in about 1925.

Frank H. Borden, Sr., 84, retired cotton mill manufacturer, banker and civic leader, died Oct. 10 at his home in Goldsboro, N. C., Mr. Borden was a leader in the organization in 1885 of the Borden Mfg. Co., and was for many years president of the Bank of Wayne.

Oscar Dressler, 86, one of the founders of Botany Worsted Mills 52 years ago, died at Lake Placid, N. Y. recently. He retired about ten years ago.

J. Newton Davies, 63, city sales manager of Economy Bias Binding Co., New York, died Oct. 15. He had previously been connected for twelve years with William E. Wright & Sons.

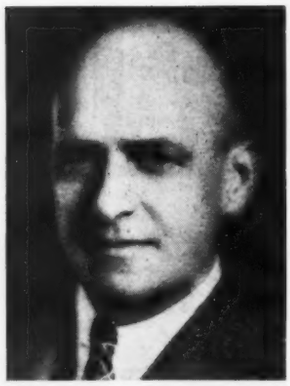
William Elliott, Jr., retired head of the Berkeley Silk Hosiery Co., Paterson, N. J., died Oct. 10.

Samuel Gilinsky, 69, senior member of the firm of the Grand Knitting Mills, Brooklyn, N. Y., died Oct. 16.

Mrs. Anna E. Rentz, 48, who operated the F. R. Rentz Silk Mills, Huntingdon Valley, Pa., died Oct. 20. She was the widow of F. R. Rentz, founder of the business.

John C. Cameron, 49, merchandise manager at Cooper's, Inc., Kenosha, Wis., died Oct. 5 in a Chicago hospital. He had been associated with Cooper's since 1931.

John Anderson, 66, vice-president of Alfred Kohlberg, Inc., importers of Chinese textiles, New York, died recently.



W. R. C. SMITH, whose passing on Oct. 7 was noted in these columns last month. He was the founder of the W. R. C. Smith Publishing Co., Atlanta, Ga.

French Campbell, Sr., retired cotton yarn salesman, died at Fall River, Mass., Oct. 1. He was with the New England Cotton Yarn Co. and later with William Whitman Co., New York.

Grover C. Caldwell, High Point, N. C., for the last 15 years general manager and superintendent of the Slane and Lockknit Hosiery Mills, died Oct. 14.

George A. Young, 47, head of the commission wool combing department of William Whitman Co., Boston, selling agents for the Arlington Mills, died at Needham, Mass., on Oct. 15. He was a trustee of the Lowell Textile Institute.

Benjamin F. Somers, 52, general superintendent of the knitting department of National Silk Hosiery Mills, Indianapolis, Ind., died recently.

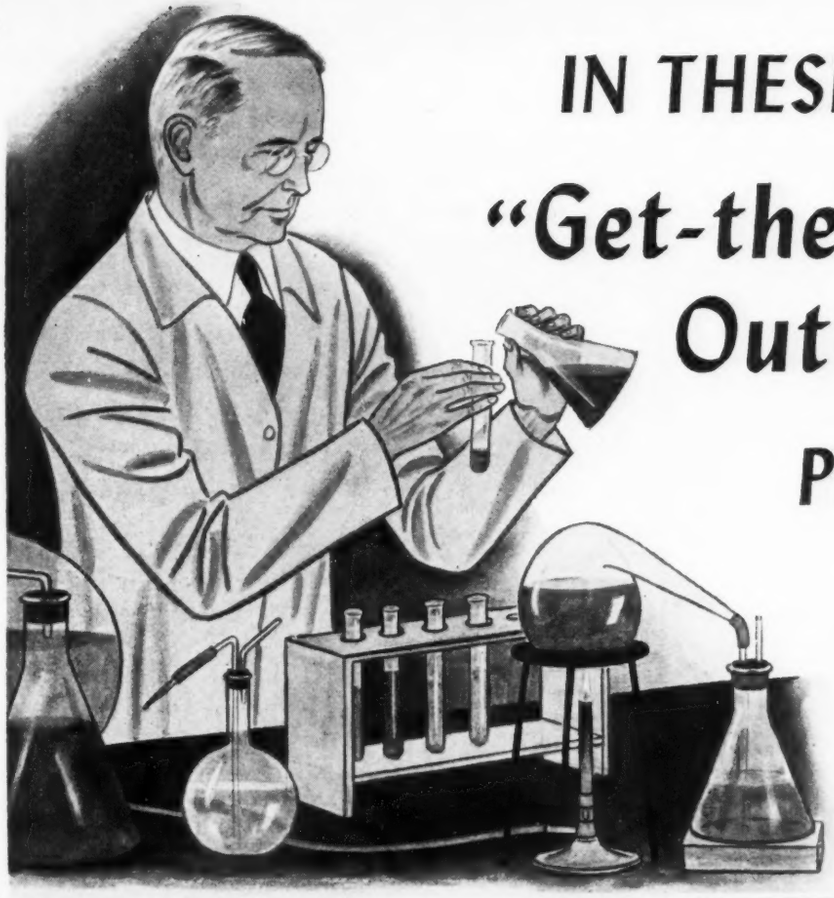
Frederick G. Henckel, whose service as representative for Jacques Wolf & Co. covered more than a quarter of a century, died at his home in Philadelphia, Oct. 9.

Joseph L. McEwen, 41, Charlotte, N. C., for the last 17 years a chemist with the Southern Dyestuff Corp, died Oct. 20.

O. C. Copeland, 61, overseer of carding of Clinchfield Mfg. Co., Marion, N. C., died recently.

Nelson R. Hart, 51, for many years an overseer at the Gonic Mfg. Co., Rochester, N. H., died recently.

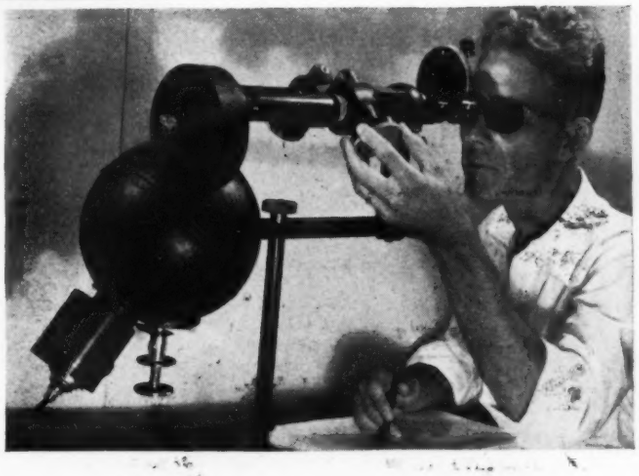
Ralph P. Burrill, 58, long prominent in the New England textile business, died in Skowhegan, Me. He began his career with the Anderson Woolen Mill, now one of the American Woolen Co. mills in Skowhegan.



IN THESE "Get-the-Goods-Out-Fast" DAYS PERHAPS WE CAN HELP

IN these hectic times, 24-hour days seem all too short to meet the heavy demands for goods to fill civilian and defense needs. In the textile industry, ways and means must be found to step up production, cut processing time, eliminate costly, wasteful tie-ups.

We're prepared—we're eager—to help you in these "get-the-goods-out-fast" days. And our help is available in two ways.



First, through supplying you with uniform, top quality textile soaps which you can depend upon for uniformly satisfactory processing results. Second, through offering you the facilities of our Textile Research Department in helping to smooth out processing difficulties you may be facing as the result of the current speed-up in production.

We're at your service—both ways. Call on us when we can be helpful.

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DOUBLE CARDED
FINEST QUALITY
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OPPORTUNITIES
TO IMPROVE YOUR PRODUCT
AND SAVE YOUR MONEY . . .

NARROWING CHAIN
Accurately made from high grade material—built to last and to hold its shape.

SINKER HEAD SLOT CUTTERS
The ideal tool for cleaning out slots in sinker and divider heads. Made in all gauges. Each one comes in a leather carrying case.

Send for bulletin giving full details on these and other products.

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TEXTILE MILL NEWS

Cotton Mill News

Algodon Mfg. Co., Bessemer City, N. C., is having Meachan & Co overhaul the entire mill.

American Yarn & Processing Co., Mt. Holly, N. C., is constructing an addition 50x80 ft., to be used as a twister room at the Woodlawn unit. New machines are being installed in the carding department replacing old machinery.

Anchor Duck Mill, Rome, Ga., is building a 1- and 2-story addition, 60x100 ft., to house waste utilization department. Hardin & Ramsey have the contract; Robert & Co. are the engineers.

Arkwright (S.C.) **Mills** are installing 24 additional cards and a new boiler.

Avondale Mills report net profit for year ended July 26, 1941, of $958,513 compared with net profit for previous year of $503,092.

Borden Mills, Kingsport, Tenn., has installed 30 new Whitin long-draft spinning frames.

Bowling Green (S.C.) **Spinning Co.** is installing eight additional cards.

Crystal Springs Bleachery, Chickamanga, Ga., is completing a 135x150 ft. weave shed with new shipping room and enlarged opener room. Modernization includes blending feeders, gyrators, 5000 spindles of new spinning, automatic filling winders, 3-cylinder slashers. Robert & Co. are the engineers and Batson-Cook Co. had the building contract.

Detroit (Mich.) **Waste Works** plan one-story addition. Cost over $40,000, with equipment. R. H. Newbrecht, Detroit, is architect.

Dixie Mills, Columbus, Ga., plan a two-story addition with some 12,000 sq. ft. of floor space, to cost $25,000. The mills are owned and operated by West Point Mfg. Co.

Esther Mill, Shelby, N. C., has begun construction of a fireproof warehouse, 100x100 ft. Daniels Construction Co., Anderson, S. C., has the contract.

Dover Mills Co., Shelby, N. C.; is erecting a three-story and basement addition to speed defense business and increase present capacity by nearly 25 %. J. E. Sirrine & Co., Greenville, S. C., architects, let contracts as follows: Building to Daniels Construction Co., Anderson, S. C.; elevator to Park Mfg. Co., Charlotte, N. C.; and sprinkler to Globe Automatic Sprinkler Co., Charlotte.

Florence Mills, Forest City, N. C., have begun erection of one-story warehouse unit, for which general contract was let to Henry B. McKoy Co., Greenville, S. C. Cost reported about $25,000. J. E. Sirrine & Co., Greenville, are architects.

Harmony Grove Mills, Commerce, Ga., is erecting an addition which will house opening room on the first floor, cloth room on the second floor and picker room on the third floor.

S. E. Hyman Co., manufacturer of automotive textile products, Fremont, Ohio, has purchased the former Johnson Ice Co. plant in that city.

Jefferson Mills, No. 3 unit, Royston, Ga., have purchased land on which 20 new dwellings will be built for operatives.

Jewel Cotton Mills, Inc., Thomasville, N. C., has begun construction of one-story and basement addition, 112x100 ft., to increase present space by about 33%. The plant has 12,480 spindles and employs about 250 people. Robert Goldberg was recently elected president, H. A. James vice-president, Clyde Armstrong treasurer, and Gerald Cooper secretary.

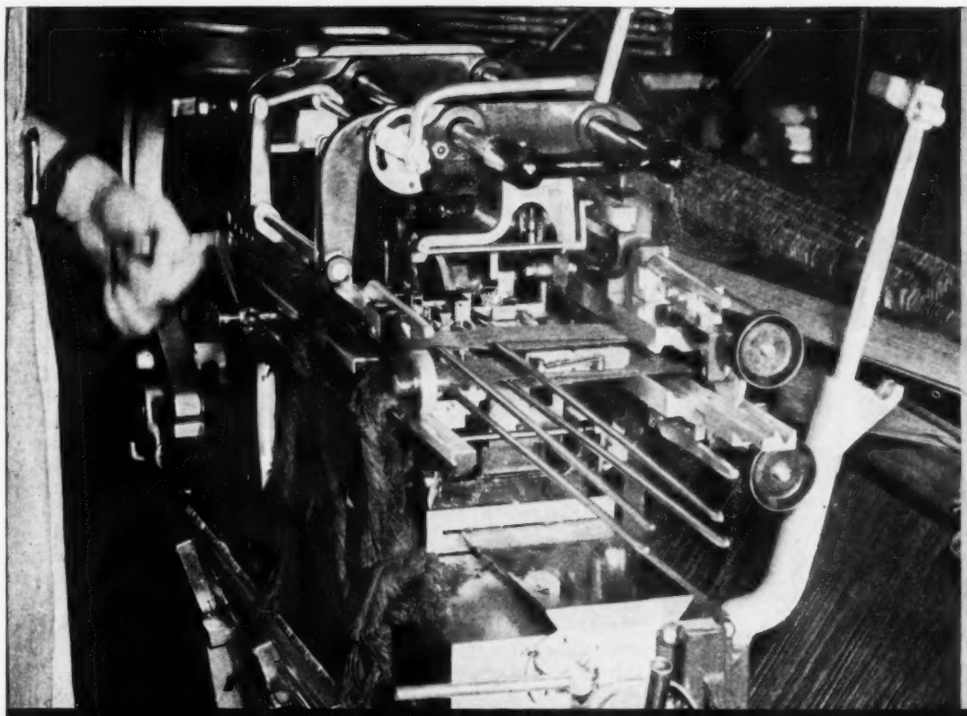
Liberty Lace & Netting Works, Bronx, New York, N. Y., will begin work soon on two-story and basement addition, 100x100 ft., for expansion. Cost reported close to $75,000, including equipment. R. G. & W. M. Cory, New York, are architects and engineers.

Linen Thread Co., Blue Mountain, Ala., is constructing a new opening room, installing new blending feeders, Buckley openers and Superior cleaners. Also installing Abington card stripping system, Parks-Cramer traveling automatic cleaners for spinning and American Moistening atomizer humidifying. Robert & Co. are the engineers.

Matson Mills, Glastonbury, Conn., plans a 3-story, 27x46 ft. frame addition. Two modern mule spinning frames will be installed.

Mills Mill No. 2, Woodruff, S. C., has begun erection of one-story warehouse addition, for which general contract was awarded to Fiske-Carter Construction Co., Spartanburg, S. C. Cost reported close to $35,000. Lockwood - Greene Engineers, Inc., Spartanburg, are architects and engineers.

Newton (N.C.) **Fiber Co.** plans installation of eight new



BARBER-COLMAN

Portable

WARP TYING MACHINE

MODEL "LS"

WOOL WARPS...TIED IN AT THE LOOM

LOW COST WARP REPLENISHMENT - HIGHEST QUALITY RESULTS

The upper picture shows the Model "LS" Warp Tying Machine in action on a "bite", or portion, of a wool warp. In the lower picture, the bite has been completely tied and is about to be cast off. Note the next bites separated, ready to be put in the machine, which is fully portable and operates in the narrow alley directly behind the loom.

BARBER-COLMAN COMPANY

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WHITMAN Yarns

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LAWRENCE, MASS.

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MONOMAC SPINNING CO.
LAWRENCE, MASS.

NONQUITT MILLS
NEW BEDFORD, MASS.

WILLIAM WHITMAN COMPANY, Inc.
NEW YORK BOSTON PHILADELPHIA CHARLOTTE

machines to manufacture insulation tape.

Pacific Mills estimates net profit for first nine months of 1941 as $1,413,150. Net sales for first half of year were 46% ahead of those for similar period in previous year. Pacific will auction industrial and other real estate in Dover, N. H., Nov. 18.

Pacolet Mfg. Co., New Holland, Ga., has installed a complete Alemite system of lubrication in both weave rooms. The old engine room has been converted into a supply room, and one new Parks elevator has been put in.

Patchogue-Plymouth Mills Corp., New York, through a subsidiary, has taken a lease on 150,000 feet of floor space in the No. 1 building of the Farr Alpaca Co., Holyoke, Mass., and will start operations late this year. Machinery will be shipped from the company's plants in Indian Orchard, Lawrence, Mass., and Patchogue, L. I., but officials say this does not necessarily mean that any of these plants will be closed.

Proximity Mfg. Co., Greenboro, N. C., has awarded contract for a billion-gallon water reservoir on Richland Creek, about 4 miles north of the White Oak Cotton Mills plant, to Hobbs Peabody Construction Co., Charlotte.

Riverdale Mills, Spartanburg, S. C., have begun erection of one-story office building at branch mill at Enoree, S. C.; also a recreational center for employes at that plant. Contract was let to Potter & Shackelford, Inc., Greenville, S. C. J. Frank Collins, Spartanburg, is architect.

Riverside and Dan River Cotton Mills, Danville, Va., has resumed generation of power in its steam plant in order to reduce current demand on the Appalachian Power Co.

Ruby Cotton Mills, Gastonia, N. C., have installed additional machinery in their picker room. They now have a new Lummus Gyrator, serving three one-process pickers.

Swift Mfg. Co., Columbus, Ga., has completed one-story office building, for which contract was awarded to A. K. Adams Co., Atlanta, Ga. Robert & Co., Atlanta, are architects and engineers. Office is air-conditioned and illuminated by fluorescent lighting.

Thomaston (Ga.) **Cotton Mills** have begun erection of two one-story buildings, to be used as a church and school, for operatives. Cost close to $100,000. Construction award has been made to Frank Binford, Thomaston. Robert & Co., Atlanta, Ga., are architects.

Trenton Cotton Mills, Gastonia, N. C., have installed new Saco-Lowell combers, replacing old style machinery.

Western Shade Cloth Co., Chicago, has begun erection of power house, 28x45 ft., 45 ft. high, for which general contract was let to H. F. Friestedt Co. Cost reported close to $45,000, including equipment.

West Point (Ga.) **Mfg. Co.** is constructing a new plant with 100,000 sq. ft. floor space for the West Point Utilization Co. which will remove thither from its present quarters in the company's Fairfax Mill. The Langdale plant has extension to opening room and new warehouses under construction. Batson-Cook Co. has the contract; Robert & Co. are the engineers.

Wool Mill News

Appleton (Wis.) **Woolen Mills** have completed remodeling a one-story building, formerly used for mechanical and garage service, and will equip for expansion in production. Orbison & Orbison, Appleton, are engineers.

Botany Worsted Mills, Passaic, N. J., have purchased 150 acres near Aberdeen, N. C., and the company will use it for a mill only in event of some future need.

Chatham Mfg. Co., Elkin, N. C., is constructing a new warehouse.

Colorado Animal Byproducts Co., Denver, Colo., has begun erection of one-story plant, 100x225 ft., at 4400 Broghton Blvd., to be equipped as a woolcarding mill. Cost over $60,000, with equipment.

Crescent Woolen Mills Co., Two Rivers, Wis., has plans for extensions and improvements in mill, and will begin work soon. Frederick W. Raeuber, Manitowoc, Wis., is architect.

Jamestown (N. Y.) **Worsted Mills** have been sold to Frederick Stern, former Rumanian textile manufacturer, now of New York. New owner is expected to take over soon.

Livingston Worsted Mills, Holyoke, Mass., bought four new Crompton & Knowles looms to replace worn equipment.

Pent Mfg. Co., New Braunfels, Tex., recently organized, has begun operations on wool tops. Plans are under way for construction of a second unit, to be equipped to double present capacity of 900,000 lbs. per annum, and work is scheduled to begin soon. Robert E. Peat is president.

No Shortage of Good Will!

For three-quarters of a century we have followed the policy of Fair Service to All. That policy is the keystone of our business today . . and that is why our customers have confidence in our ability to protect their interests through the present emergency. They are confident that high quality will be the hallmark of our textile starches . . corn, potato, wheat . . in the future as unquestionably as it is today. They know that our products will continue to reflect the craftsman's art in skillfully converting the best materials the world affords. We shall do all in our power to preserve and strengthen this customer confidence and good will.

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We are anxious to supply all customers promptly; but, like you, we are 100% for the defense program and if you have government contract numbers, please do not fail to supply them with your order to facilitate our meeting your defense needs quickly.

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SPECIAL REPORTS

FALL RIVER, MASS. **GREENVILLE, S. C.**

TEXTILE MILL NEWS

Talbot Worsted Mills Co., Bristol, Pa., have leased buildings 3 and 3-A of the Middishade Block, 30th & Reed Sts., Philadelphia, for plant expansion.

Textile Processing Co., Woonsocket, R. I., have purchased and are occupying a building for new quarters. The company does commission combing of wool.

Rayon & Silk Mill News

Apex Weaving Co. has taken over Manchester Co., Woonsocket, and is producing rayon cloth on 150 looms. John Hanna is manager. The company sells through the Belgrade Co., of New York.

Atlantic Mills, Inc., New Bedford, Mass., has started 120 looms in former Booth mill on rayons. It is a division of Columbia Weaving Co., New York.

Burlington Mills Corp., has purchased the Smithfield (N.C.) Mfg. Co., and plans to use it for the manufacture of cotton yarns.

Cadillac Silk Mills, Inc., Valley Falls, R. I., has built a 4-story elevator well from plans by C. R. Makepiece & Co., Providence.

Duplan Corp., New York, N. Y., is discontinuing operations in the converting field, and will concentrate on rayon throwing and gray goods production at its different mills in the future.

Robert Hirss, has acquired Plant A of J. B. Martin Co., Taftville, Conn., idle since damaged by 1938 hurricane and will operate on manufacture of rayon specialty goods. J. B. Martin Co. continues to own and operate units at Norwich and Montville.

Jefferson Mills, Pulaski, Va., will expand on Nylon production, installing four new sizing machines, 50 new coning machines, 10 twisters and accessory equipment. Present silk-winding machines will be remodeled for redraws. Capacity of mill be doubled.

National Rayon Corp., Cleveland, Ohio, which has leased the Acme plant as reported last month, expects to start up about Dec. 1. Henry von Kohorn is plant superintendent; A. Politizer is plant manager. Product will be a variety of vicose process yarns for weaving and knitting.

Nylon Division of E. I. du Pont de Nemours & Co. announced that production began at the new Nylon plant in Martinsville, Va., during the week of Nov. 3. The Martinsville plant, on which construction was started less than eleven months ago, eventually will double the present Nylon output, but production will be small in the beginning. It will concentrate on 30 denier for hosiery.

Piedmont Plush Mills, Greenville, S. C., have begun a one-story warehouse, for which general contract was let to G. M. Cox, Greenville. Cost reported about $25,000. J. E. Sirrine & Co., Greenville, are architects.

C. H. Ross, executive head of Ross Fabrics, Inc., Morganton, N. C., and associates, plan establishment of a new weaving mill. Contract for construction of the new building has already been awarded.

William Skinner & Sons, Holyoke, Mass., has received delivery of 30 new Draper looms for its Railroad Street division, and they will soon be put into operation. This brings the total of new looms purchased by Skinner within the last 18 months to 222.

Stanley (N.C.) **Mills** are scheduled for operations about Jan. 1. New mill will consist of two distinct units, one for throwing and one for spinning. The output will be blended yarns for a group of mills under the same selling organization at Shelby, N. C., South Boston, Va., Slater, S. C., and Greensboro, N. C. Atwood throwing machines will be used for crepe and other rayon yarns, while new Whitin spinning frames will be installed for spun rayon.

Staunton (Va.) **Textile Corp.,** recently organized subsidiary of Celanese Corp., New York, N. Y., will begin work soon on new rayon weaving mill at Verona, Va. (previously reported), for which general contract has been let to George F. Hazelwood Co., Cumberland, Md. It will be located on tract of 150 acres of land and is reported to cost close to $500,000, including equipment.

Knitting Mill News

Alden Mills, New Orleans, La., have closed down for an indefinite period due to labor difficulties, and liquidation is said to be under consideration.

Allen A Co., Bennington, Vt., has sold its plant at 119 Scott St., to E-Z Mills, Inc. Other properties at Bennington, Vt., and New Ipswich, N. H., together with all machinery

HOW MUCH TIME FOR "TIME OUT?"

Knitting Machines Like Football Teams only "Score" When in Action

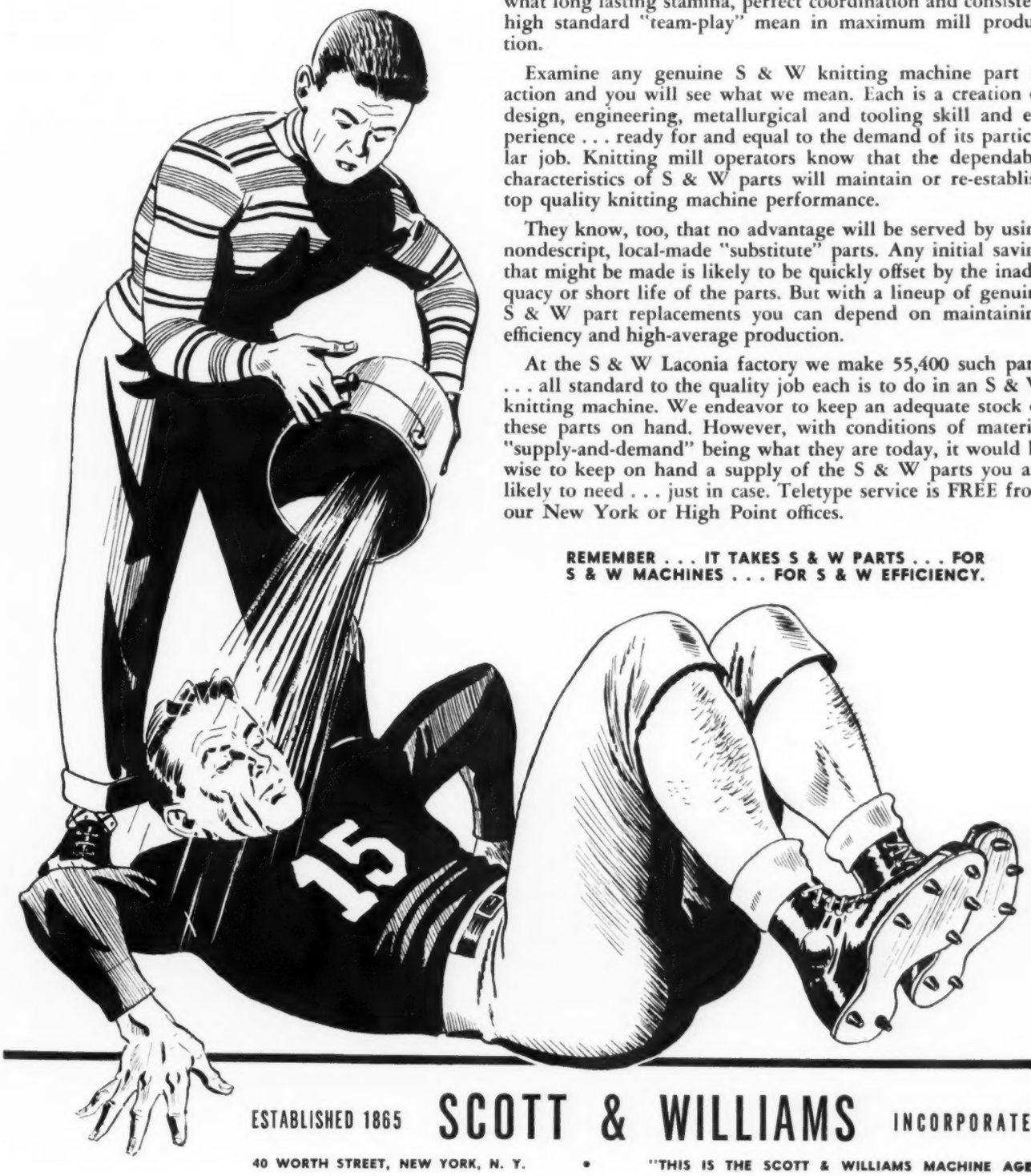
S & W knitting machine parts are outstanding examples of what long lasting stamina, perfect coordination and consistent high standard "team-play" mean in maximum mill production.

Examine any genuine S & W knitting machine part in action and you will see what we mean. Each is a creation of design, engineering, metallurgical and tooling skill and experience . . . ready for and equal to the demand of its particular job. Knitting mill operators know that the dependable characteristics of S & W parts will maintain or re-establish top quality knitting machine performance.

They know, too, that no advantage will be served by using nondescript, local-made "substitute" parts. Any initial saving that might be made is likely to be quickly offset by the inadequacy or short life of the parts. But with a lineup of genuine S & W part replacements you can depend on maintaining efficiency and high-average production.

At the S & W Laconia factory we make 55,400 such parts . . . all standard to the quality job each is to do in an S & W knitting machine. We endeavor to keep an adequate stock of these parts on hand. However, with conditions of material "supply-and-demand" being what they are today, it would be wise to keep on hand a supply of the S & W parts you are likely to need . . . just in case. Teletype service is FREE from our New York or High Point offices.

REMEMBER . . . IT TAKES S & W PARTS . . . FOR S & W MACHINES . . . FOR S & W EFFICIENCY.



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DAWSON CLAY
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for
Soft Smooth Finishes
Exceptionally smooth white inerts particularly suitable for textile work and back-filling.
Samples are yours for the asking.
UNITED CLAY MINES
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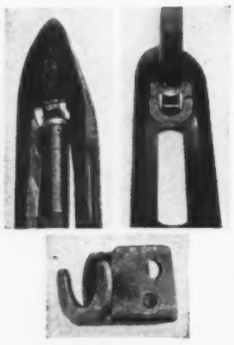

Protect Your Rayon Tubes and Bobbins with this Catch
Watson-Williams new simplified One-piece Guide and Catch, case hardened, supplied in silk or rayon shuttles of fibre or dogwood, offers thorough protection for your tubes and bobbins. Place a sample order today.
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WATSON-WILLIAMS
MANUFACTURING CO.
MILLBURY, MASSACHUSETTS

has been sold to Edward Jacobs & Co., New York, and will be liquidated at private sale and auction.

Canadian Industries, Ltd., Montreal, Que., will install a knitting division for hosiery production at new Nylon yarn mill now in course of construction at Kingston, Ont., scheduled to be ready for operation early next year. Entire project will represent an investment in excess of $1,000,000.

Contour Hosiery Mills, Rockford, Ill., have asked bids on general contract for one-story addition, 17x70 ft., for expansion. Cost reported about $20,000, with equipment. Hubbard & Hyland, Rockford, are architects.

Dover (Ohio) **Knitting Mills,** recently organized, have begun production of sweaters in a one-story building. It is proposed to increase present capacity early next year.

Draper Bros. Co., Canton, Mass., is erecting a two-story addition, 150x200 ft., for which general contract was let to R. L. Whipple, Worcester, Mass. Cost reported close to $140,000, with equipment. Charles T. Main, Inc., Boston, Mass., is architect and engineer.

E-Z Mills, Inc., Bennington, Vt., has bought the Scott St. plant of Allen-A Co. and will occupy it for expansion. The E-Z firm has been growing in recent years, acquiring the Otis line in 1937 and the Lawrence trade mark in 1940, and the new property gives opportunity for orderly expansion. E-Z also operates a plant at Cartersville, Ga.

Melrose Hosiery Mill, High Point, N. C., plans a concrete-block warehouse, 50x103 ft. Delk & Younts, High Point, have the contract.

Springfield (Mass.) **Knitting Mills Co.** has started manufacture of knitted fingered gloves for the Army and Navy in a new plant on the fourth floor of 36 New Dwight Street, Springfield. Fred Elias is manager.

Sport-Wear Hosiery Mills, Philadelphia, Pa., have leased a one-story building at Maryville, Tenn., for new branch mill, operating in conjunction with present mill at Etowah, Tenn. Machinery willl be installed for employment of about 100 persons.

Union Knitting Co., is the firm name under which Kinzuchi Kimoto and Alice Y. Kimoto have obtained a certificate to conduct business at 101 Weller street, Los Angeles, Calif.

Washington Mills Co., Mayodan, N. C., is completing five-story addition, 91x100 ft.

Processing Plant News

American Masking Co., New Britain, Conn., has been incorporated by Harry L. Bane and Marshal Fife to manufacture a new latex product by a secret process. A small plant on Stanley Street has been taken over by the company, which is capitalized for $50,000.

Bradford (R.I.) **Dyeing Associates** have filed plans for a 1-story frame and concrete storage unit, 60x160 ft. R. A. Bherman's Sons' Co., Westerly, has the general contract, and Samuel Nardone, Westerly, will build the foundations.

Dorlexa Dyeing & Finishing Co., Slocum, R. I., owned by Airedale Mills, Woonsocket, has installed finishing machinery to increase capacity. Ralph E. Hudson is general manager.

Fabien Textile Printing Co., Inc., Lodi, N. J., will begin work soon on one-story addition, about 35x40 ft., for expansion. Also, will make improvements in present mill.

Fontaine Converting Works, on Smith's River, near Martinsville, Va., have completed an addition for shipping and storage, which cost over $10,000.

Grenada, Miss.—A hosiery finishing plant costing $50,000 will be erected here. Money will be raised by a municipal bond issue. The new plant would require installation of $125,000 worth of new machinery.

Lincoln Bleachery & Dye Works, Lonsdale, R. I., by arrangement with Cravenette Co., will offer the Cravenette water repellent process to the trade. Also similarly licensed are: Joseph Bancroft & Sons Co., Wilmington, Del., Sayles Finishing Plants, Saylesville, R. I.; Bradford Dyeing Assn., Westerly, R. I.

Springdale Finishing Co., Canton, Mass., has installed a new Sanforizing machine supplied by Morrison Machine Co., Paterson, N. J., capable of handling 60 in. gray goods. Firm has also just finished installation of a new 72-in. mercerizer.

Unity Dyeing & Processing Co., Philadelphia, Pa., recently organized, has begun operations at Unity and Leiper Streets, specializing in the dyeing of cotton yarns in skeins, cotton tapes, etc. Roland Grauch, formerly connected with Ankokas Mills, Mount Holly, N. J., is manager of yarn-dyeing department; and Eugene Martin, previously with Russell Mfg. Co., Middletown, Conn., is head of tape division.

We Cater To Your Individualism . . .

We know that textile mills achieve distinction for their products by processing them according to exclusive techniques built around individual formulas. You probably use several of these private formulas in your own mill.

That's why Armour's soap technicians have produced under careful laboratory control several soaps with different characteristics for essentially the same particular processes. So that you can use the exact soap that fits your formula.

If you scour cotton, full heavy wool or perform similar operations, these two high titer tallow soaps will achieve excellent results for you—consistently—at a real saving.

FLINT CHIPS AND POWDER

Tallow base. Titer 41-42 C.

INDUSTRIAL CHIPS AND POWDER

Tallow base. Titer 39-40 C.

These two tallow soaps are prepared from the highest quality raw materials under constant laboratory check control. You can't buy better soaps.

Make it a point to phone, wire, or write your nearest Armour and Company representative today for the complete story on Flint and Industrial. He'll gladly tell you how you can reduce your soap costs and raise your production quality with these two tallow soaps. That's worth looking into!

Ask about Armour's CERTIFIED SOAP, OLIVE SOAP, and TEXSCOUR FLAKES for your light duty work; PALM SOAP for your heavy duty work.

Remember—for your individualism—a specific ARMOUR soap!

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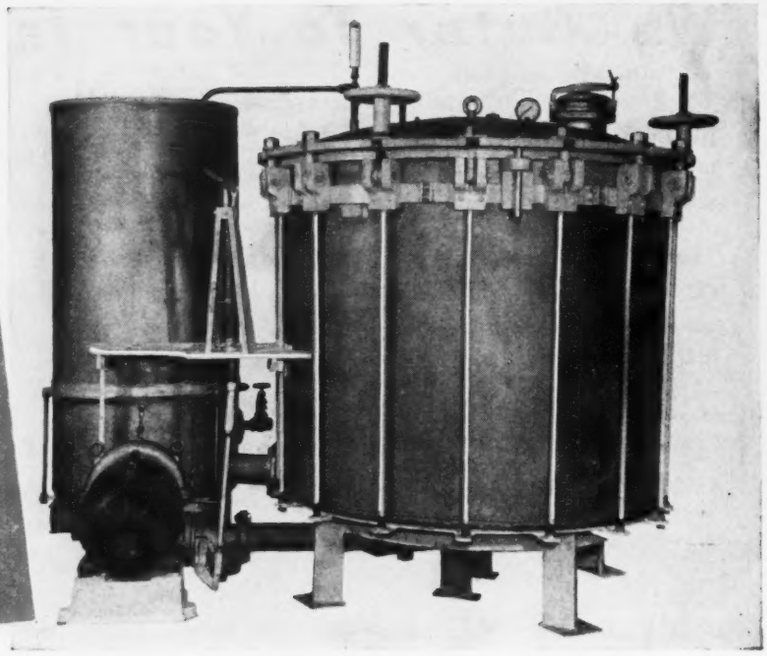
Why this machine is particularly suitable for dyeing *Rayon Staple*



STAINLESS STEEL MODEL

This machine can be loaded to capacity with rayon staple, without recourse to load separating devices, and the stock will come out uniformly dyed and in good condition for subsequent processing. Its adaptability in this respect is due to the following reasons:—

1. Its ruggedness gives an ample margin of safety for the highest pressures encountered.

2. An exceptionally powerful pump provides adequate circulation.

3. Dyeing at less than boiling temperature (190°) it is easy on the fibre.

Savings in steam, labor, water and dyestuffs with this machine frequently pay for it in one to two years. It dyes in a closed kettle under hydraulic pressure with a short bath. Stock is unloaded in cheese form on a false bottom by electric hoist and may be transferred to the squeeze rolls by overhead trolley.

This same machine is also suitable for dyeing raw wool and cotton.

FRANKLIN PROCESS STOCK DYEING MACHINES

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Dyeing and Processing Machines • *Custom Yarn Dyeing*

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UNLOADING. Note patented dividing fin.

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WORKS BETTER THAN OLD ONE 6 TIMES ITS SIZE!

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This experience related by a New Jersey textile manufacturer is typical performance for Sarco Steam Traps. Always smaller than you would expect for the loads they carry, invariably lasting longer, Sarcos frequently save their cost in both time and fuel in a few weeks.

SARCO *Saves Steam*

ALL-OUT PRODUCTION WITH SARCO

Idle condensate is a menace that fast acting Sarco Steam Traps eliminate.

Get the right type of Sarcos in the right spots all over your plant and you will get the speed, security and economy of production you are entitled to. Get the positive actuation of the famous Sarco Thermostatic Bellows and get the help of the nearest Sarco Representative to solve the special heating problems in your plant.

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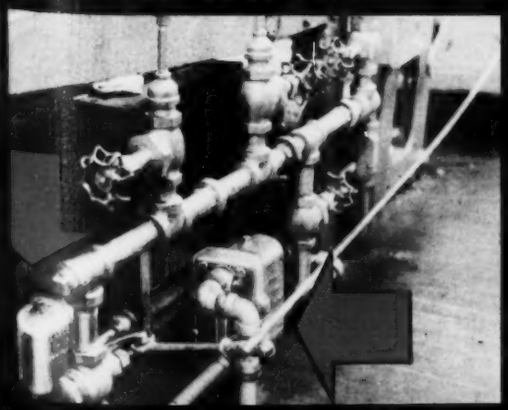
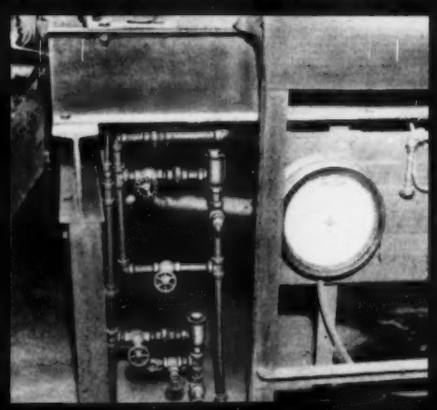
Sarco Bucket Traps on Dryer



Sarco No. 9 Thermostatic Traps on Dye Vat



Sarco Float-Thermostatic Trap on Steam Header

"Greater Output...MORE WORK, LESS COST WITH SARCO CONTROL"

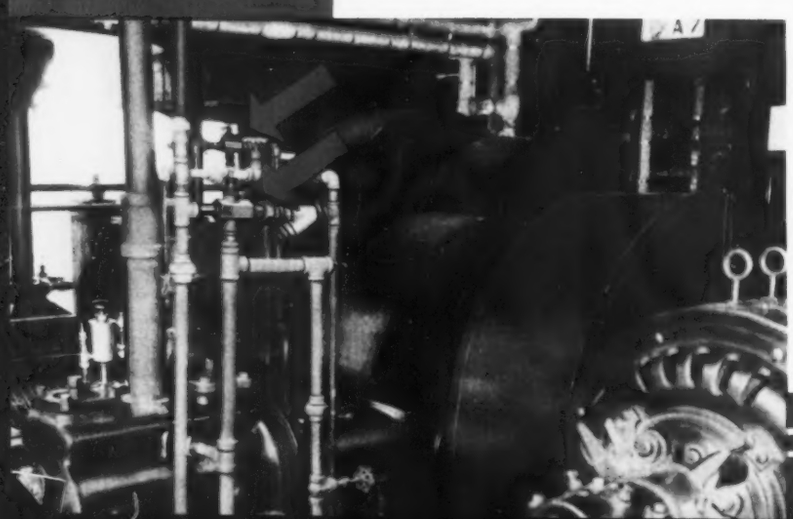
TR-21
TEMPERATURE
CONTROL

. . . Says the superintendent of this Pennsylvania textile plant. Here Sarco Temperature Controls and steam coils replaced electrical equipment with a saving which they estimate to be on a ratio of five to one. Steam emitted at the bottom of the pan is controlled within a few degrees at all times. No boiling or override—no stoppage—just one truck load of spools after another, day in and day out.

Sarco Temperature Control is an important factor in making plants run smoother and produce more, at less cost.

Sarcos, in various types, control temperatures of hot water, cooling water, air, kettles, tanks, or any equipment heated by steam, gas or oil, or cooled by water or brine. Ask for Catalog No. 52.

SARCO COOLING CONTROLS SAVED THEIR COST IN A WEEK



"It's only human for an operator to open up jacket water valves wider than necessary on Diesels and compressors in order to play safe.

"This little TR-40 Control cost very little and was quickly installed. Now—on test we use about one tenth of the water on each compressor, and the jacket temperature is kept at the maximum compressor efficiency point.

"Also, we now use one third as much oil, and the excess does not blow through into our air lines.

"I don't know when we have made as big an improvement for as little money."

Chief Engineer New Jersey Textile Plant (Name on request)

Sarco Cooling Controls are described in Catalog No. 700.

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THE EMERGENCY
and
HERCULES PINE OILS

LONG before there was anything unusual stirring in the textile industry, Yarmor* 302 (made soluble) had become so well established for wet processing that we had to increase production several times.

When defense orders began to pour into textile mills, they needed more than ever the speed, thoroughness, and economy with which Yarmor 302 wets, penetrates, loosens dirt and grease, and suspends them for clear rinsing. Your orders soon reached such a volume that working three shifts in greatly enlarged plants, we were hard pressed to keep pace with the demand for Hercules Pine Oils.

To meet a special situation in the woolen industry, which was called upon suddenly to produce millions of extra yards of O.D. overcoating and blanketing, Hercules developed Yarmor 302-W. This new pine oil enables woolen manufacturers to cut fulling operations as much as 30 per cent, just when the need for saving time is greatest. And moreover, it has already been demonstrated that Yarmor 302-W possesses important advantages for wet processing all textiles; so that this new product, born of the emergency, will become a permanent contribution of value to the whole textile industry.

Constant improvements are being made in pine oils as a result of Hercules research. Operators are gaining increased experience in using Yarmor 302-W and the other new materials. When normal business returns, these new Hercules products will be even more widely and firmly established.

In the meantime, we are doing our utmost to serve old customers promptly with their full requirements. We hope that soon we shall be able to welcome new customers also.

Reg. U. S. Pat. Off., by Hercules Powder Company

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NAVAL STORES DEPARTMENT

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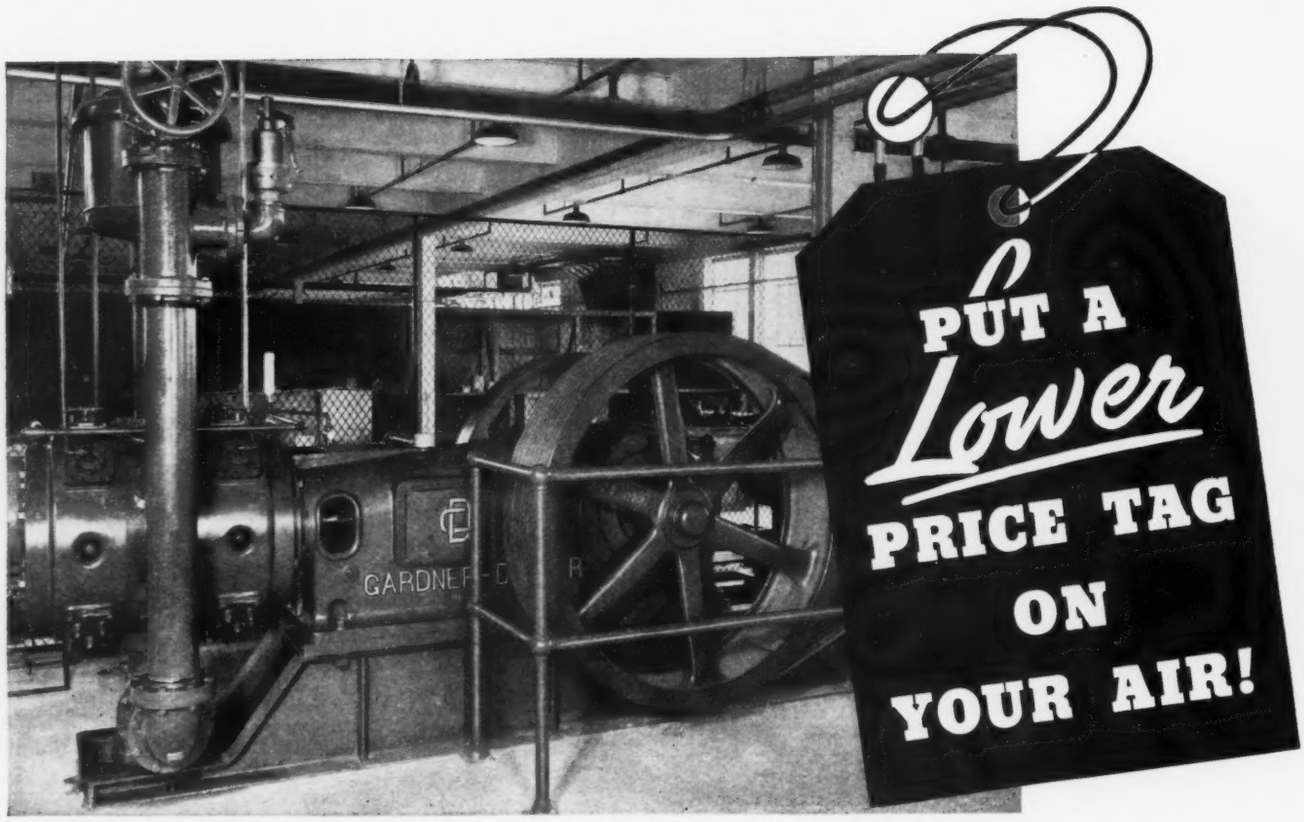
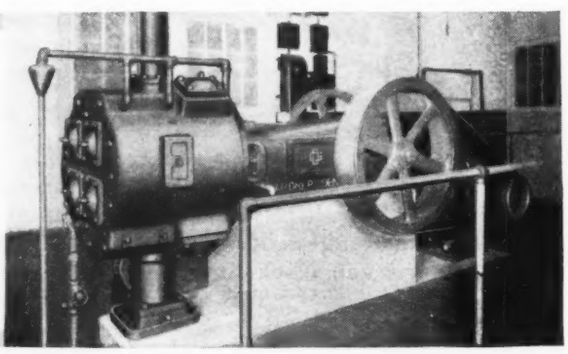


PLENTY of compressed air can solve many production problems in textile mills today. But it must be *low cost* air. That's why Gardner-Denver "RX" Single-Stage Horizontal Air Compressors —with their unusually low h. p. requirements — are first choice in so many of the nation's mills.

SOME OF THE OUTSTANDING "RX" ADVANTAGES ARE:

1. **Long service assured by rugged, dirt-free construction.**
2. **Increased efficiency due to large and unrestricted valve and port areas and extra large water jackets.**
3. **Air output automatically regulated to fit air needs.**
4. **"Air-Cushioned" Duo-Plate valves that actually become tighter with use.**
5. **Capacities from 89 to 1292 cubic feet displacement per minute.**
6. **May be equipped for any type of drive.**

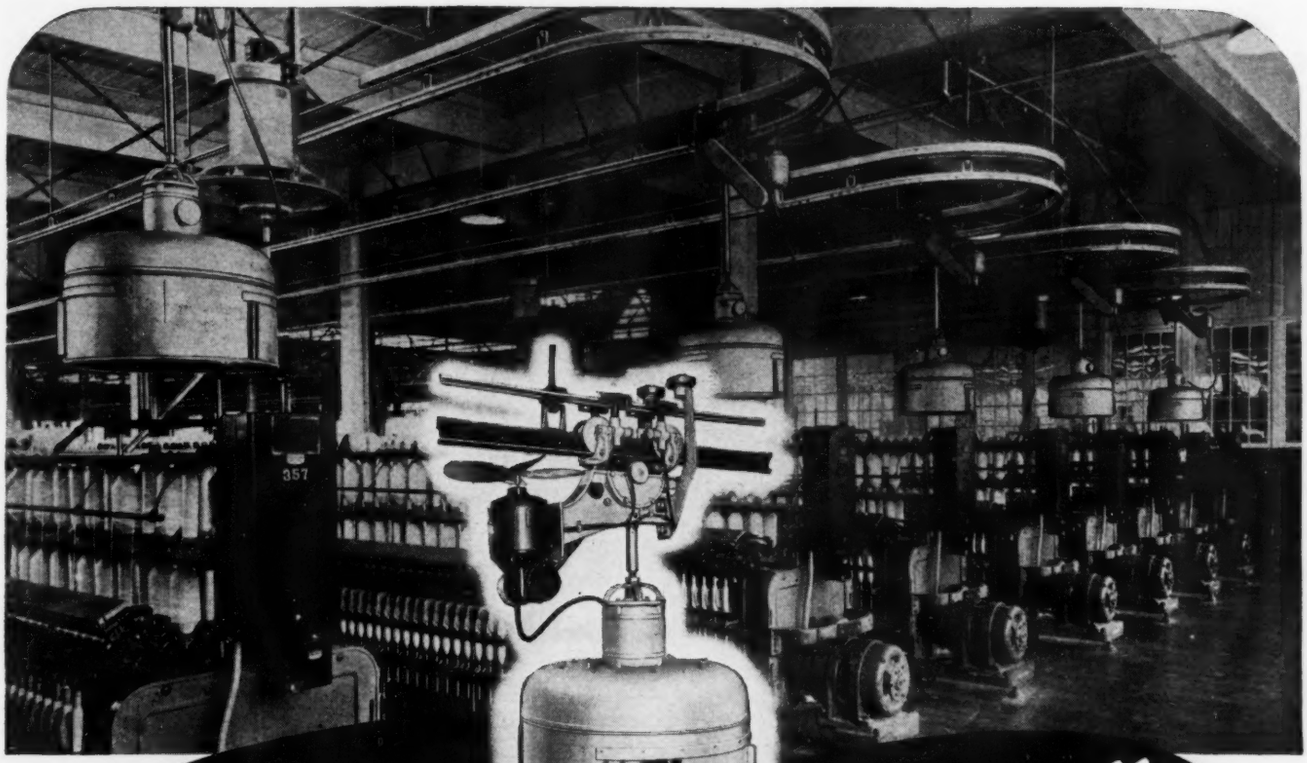
Gardner-Denver "RXV" Vacuum Pumps are similar in construction to the "RX" Compressor described above. They are especially built for heavy duty, continuous service in lint cleaning, cotton carding, and other uses. Horsepower requirements are low. Designed to produce high vacua above 28 inches Hg when required.



GET THE FACTS **on Gardner-Denver "RX" Compressors and "RXV" Vacuum Pumps! Write today to Gardner-Denver Company, Quincy, Illinois.**

GARDNER-DENVER *Since 1859*

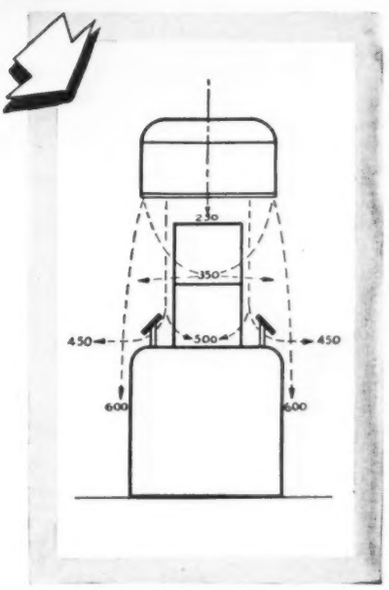
Atlanta, Ga.; Birmingham, Ala.; Boston, Mass.; Hazleton, Pa.; Knoxville, Tenn.; Washington, D. C.; New York, N. Y.; Philadelphia, Pa.; Pittsburgh, Pa.



CLEANING IS DONE *Better, Quicker* AND *More Economically* WITH AMERICAN MONORAIL *Automatic* OVERHEAD CLEANERS

IN many mills, hand cleaning has given away to automatic cleaning. Over spinning, winding, twisting and warping machinery, American MonoRail Automatic Overhead Cleaners have proved successful in cleaning frames and ceilings and preventing accumulation of lint. With this scientifically designed blower that passes at short, regular intervals over the machine, supplying swirling currents of air, carefully directed and adjusted to meet varying conditions, hand cleaning is greatly reduced. Automatic cleaning keeps machines producing full time, enables operators to increase their output and reduces the number of gouts or bunches in the yarn.

Let an American MonoRail Engineer explain further advantages and economies of "Controlled Cyclonic Cleaning" or write for copy of 24-page book.



Indicates average values of air currents in feet per minute. Correct velocity where needed most . . . note that the highest velocities circulate around the bottom creel board and the roll stands.

THE AMERICAN MONORAIL CO.
13108 ATHENS AVENUE **CLEVELAND, OHIO**

ABOVE: *RF fluorescent lighting floods the universal coning machines with 37 footcandles at the work surface (at a 45 degree angle from horizontal). The illumination on the horizontal is from 40 to 50 footcandles throughout the area.*

AT RIGHT: *A Cooper-Hewitt mercury vapor lamp is used for yarn inspection because its monochromatic quality of light tends to magnify detail.*

GETS 270% MORE LIGHT...

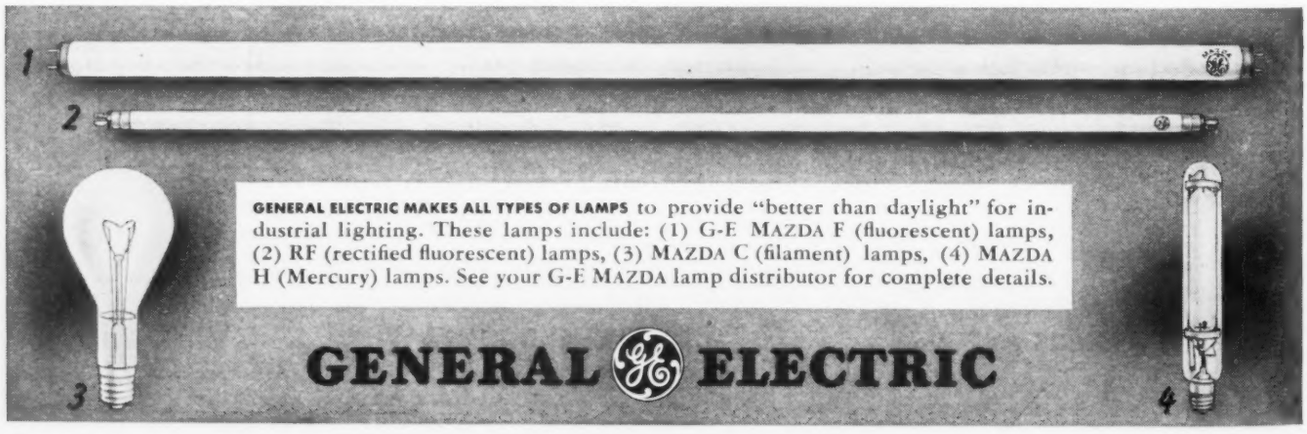
but uses the Same Current with G-E RF fluorescent lighting!

IN THE American Viscose Corporation's Mills, Lewistown, Pennsylvania, shown above, General Electric RF (rectified fluorescent) lamps provide 270% more light with the same current as the former lighting system.

THIS NEW KIND OF LIGHT costs little to install and provides "better than daylight" illumination because it is efficient, economical, and dependable 24 hours a day. RF fluorescent lamps (actually improved Cooper-Hewitt type lamps) are made in both industrial-white and blue-white types and have been reduced to $3.65.

IN ADDITION, new simplified RF luminaires are now available with power factor better than 90%, requiring no voltage adjustment. They start almost instantly without starter units.

FIND OUT TODAY how easy it will be to install G-E RF lighting in your mill, engineered to your needs. See your G-E MAZDA lamp distributor. General Electric Company, Nela Park, Cleveland, Ohio.



GENERAL ELECTRIC MAKES ALL TYPES OF LAMPS to provide "better than daylight" for industrial lighting. These lamps include: (1) G-E MAZDA F (fluorescent) lamps, (2) RF (rectified fluorescent) lamps, (3) MAZDA C (filament) lamps, (4) MAZDA H (Mercury) lamps. See your G-E MAZDA lamp distributor for complete details.

GENERAL ELECTRIC

Fairbanks Dial Scale head with Printomatic weigher. Prints weights and related data on tickets, roll tape, ticket and tape . . . even on sheets as wide as 18 inches.

DISCOVERED!

● The bigger they are, the easier to catch. It's the causes of small losses that are hard to discover.

Inaccurate weighing often causes only a negligible loss *each time.* But the total by the year can be of staggering importance.

Experienced Fairbanks Scale men quickly find the causes of inventory losses due to inaccurate or careless weighing. They can prescribe weighing methods which assure absolute adherence to formulae in mixing dye or bleach baths . . . methods which *keep ingredient proportions secret,* if you wish. They can provide scales which print weight records and add up weights and record totals.

The knowledge and experience of Fairbanks Scale engineers are at your service. Write Fairbanks, Morse & Co., Dept. K-204, 600 South Michigan Avenue, Chicago, Illinois. Branches and service stations throughout the United States and Canada.

FAIRBANKS·MORSE SCALES

DIESEL ENGINES ELECTRICAL MACHINERY RAILROAD EQUIPMENT WASHERS-IRONERS STOKERS
PUMPS MOTORS WATER SYSTEMS FARM EQUIPMENT AIR CONDITIONERS

You buy fewer valves when you buy LUNKENHEIMER

Why? Because Lunkenheimer construction features minimize wear and insure longer service life with less maintenance.

The use of non-corrodible alloys at vital points—design and construction that eliminate excessive wear of working parts — thorough, scientific tests of every valve before shipment—are features of Lunkenheimer Valves that make for longer life, fewer repairs, continuity of service, and lower costs.

Actually you need fewer valves when you use Lunkenheimer because they give you less trouble and stay in service longer. This is extremely important now when virtually all materials have become increasingly necessary to defense activities. You can help conserve these needed materials—insure valve satisfaction—buy fewer valves . . . by specifying Lunkenheimer.

Your Lunkenheimer distributor is co-operating in every way to give you the kind of service you so vitally need for the National Defense program. His facilities will save you time and trouble.

ESTABLISHED 1862
THE LUNKENHEIMER CO.
"QUALITY"
CINCINNATI, OHIO, U. S. A.
NEW YORK CHICAGO
BOSTON PHILADELPHIA
EXPORT DEPT. 318-322 HUDSON ST., NEW YORK

PROPERTY:	MONEL	'R' MONEL	'K' MONEL	'KR' MONEL	'S' MONEL	NICKEL	'Z' NICKEL	INCONEL
CORROSION RESISTANCE	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT
STRENGTH	GOOD	GOOD	EXCELLENT	EXCELLENT	GOOD	GOOD	EXCELLENT	GOOD
TOUGHNESS	GOOD	GOOD	EXCELLENT	GOOD	GOOD	EXCELLENT	EXCELLENT	EXCELLENT
HARDNESS	GOOD	GOOD	GOOD	GOOD	EXCELLENT	FAIR	EXCELLENT	GOOD
MACHINABILITY	GOOD	EXCELLENT	GOOD	EXCELLENT	GOOD	GOOD	GOOD	GOOD
NON-GALLING					EXCELLENT			
SPRING PROPERTIES	GOOD		EXCELLENT			GOOD	EXCELLENT	EXCELLENT
ELEC. CONDUCTIVITY	FAIR	FAIR				GOOD	GOOD	
HEAT RESISTANCE	GOOD		GOOD		EXCELLENT	GOOD		EXCELLENT
HEAT TREATABLE			YES	YES	YES		YES	
NON-MAGNETIC	NO	NO	YES	YES	NO	NO	NO	YES

Get important facts on the wide range of properties offered by Monel and other INCO Nickel Alloys

Vast resources of machines, materials and manpower are today being utilized in producing for National Defense. After The Emergency these resources will once more become available for normal peace-time use.

No one can foretell when this will take place. But farsighted business men are planning for it now.

As an aid to such planning we suggest you look into the INCO Nickel Alloys.

Each of these metals is strong, tough and highly resistant to corrosion . . . yet each offers additional properties peculiar to itself. One or more of the INCO Nickel Alloys may therefore be just the metal you need for a new product or new equipment.

For equipment that has to resist erosion, corrosion, stress and wear plan to use INCO Nickel Alloys. Their unexcelled past performance warrants your planning for their future use.

THE INTERNATIONAL NICKEL COMPANY, INC., 67 Wall Street, New York, N. Y.

MILLIONS ON GUARD

Along the industrial front, endless regiments of "Unbrako" Screw Products are being called into action. They're always on guard, helping to protect the machinery that makes America strong.

"Unbrako" Screws possess immense strength. They are turned out uniformly and accurately to extremely close limits. But it's their unique speed-up and trouble-saving features that lift them above the ordinary . . . that you'll want to use.

Look at the KNURLED Socket Head Cap Screw: the greasiest fingers gear right to the KNURLING and run the screw down without slip or annoying lost motions. Ask your mechanic—he'll tell you how much assembly time it saves.

And look at the Self-Locking Hollow Set Screw with the *Knurled* points: turn it home with no more than average pull . . . and the *Knurling* locks the screw in place with a vibration-defying grip. It saves all kinds of trouble. Can be used repeatedly too.

Make your next order "UNBRAKO". It pays.

The KNURLING of Socket Screws originated with "Unbrako" years ago.

STANDARD PRESSED STEEL CO.
JENKINTOWN, PENNA. Box 571

BRANCHES
BOSTON • DETROIT • INDIANAPOLIS • CHICAGO • ST. LOUIS • SAN FRANCISCO

Reg. U.S. Pat. Office

UNBRAKO *Screw Products*

THEY HELP US GET
New Customers

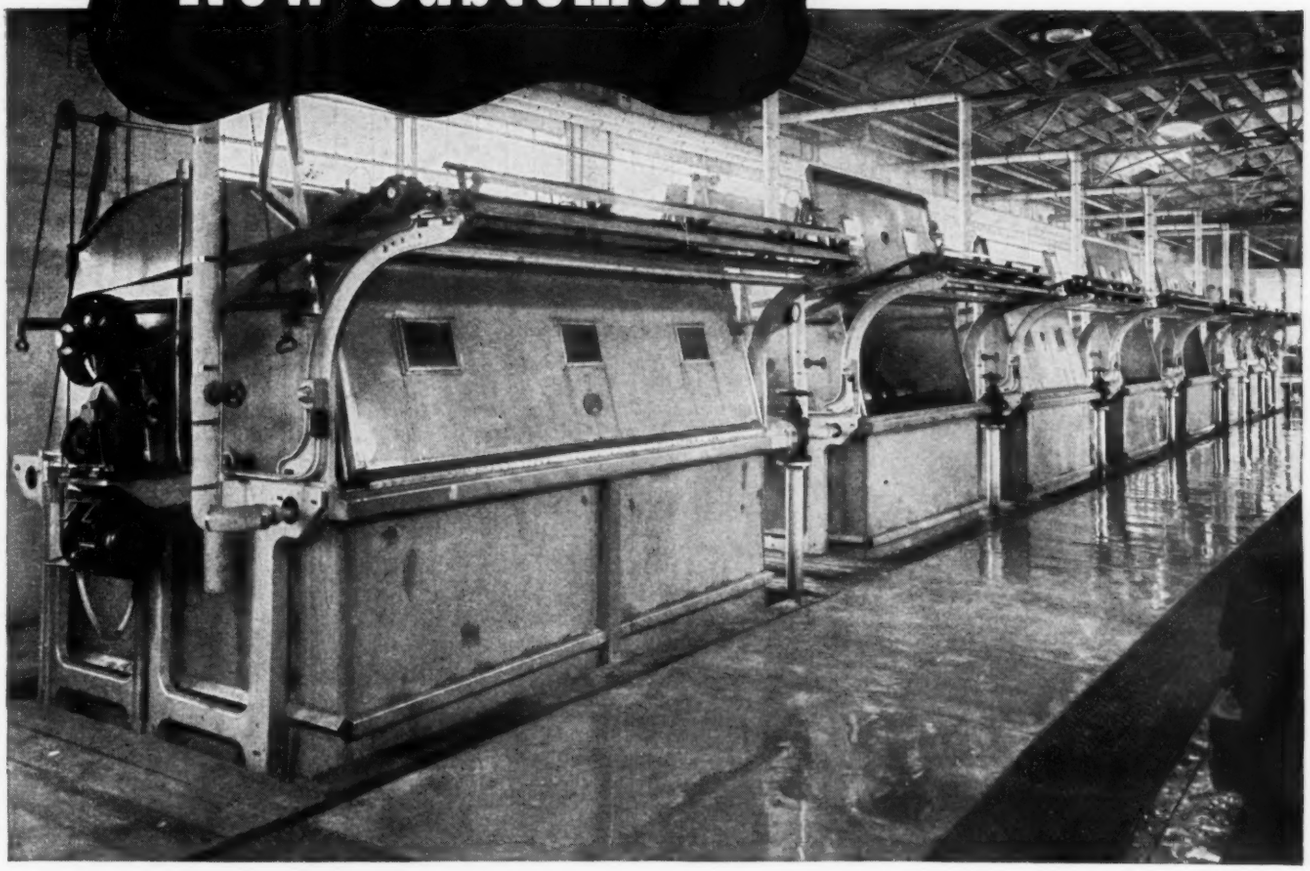


PHOTO COURTESY JAMES HUNTER MACHINE COMPANY

"You may be surprised to know that we consider our equipment an important *sales* weapon. Buyers often make favorable comments about it. In some cases we have clinched sizeable orders only after the customer inspected our plants and machines."

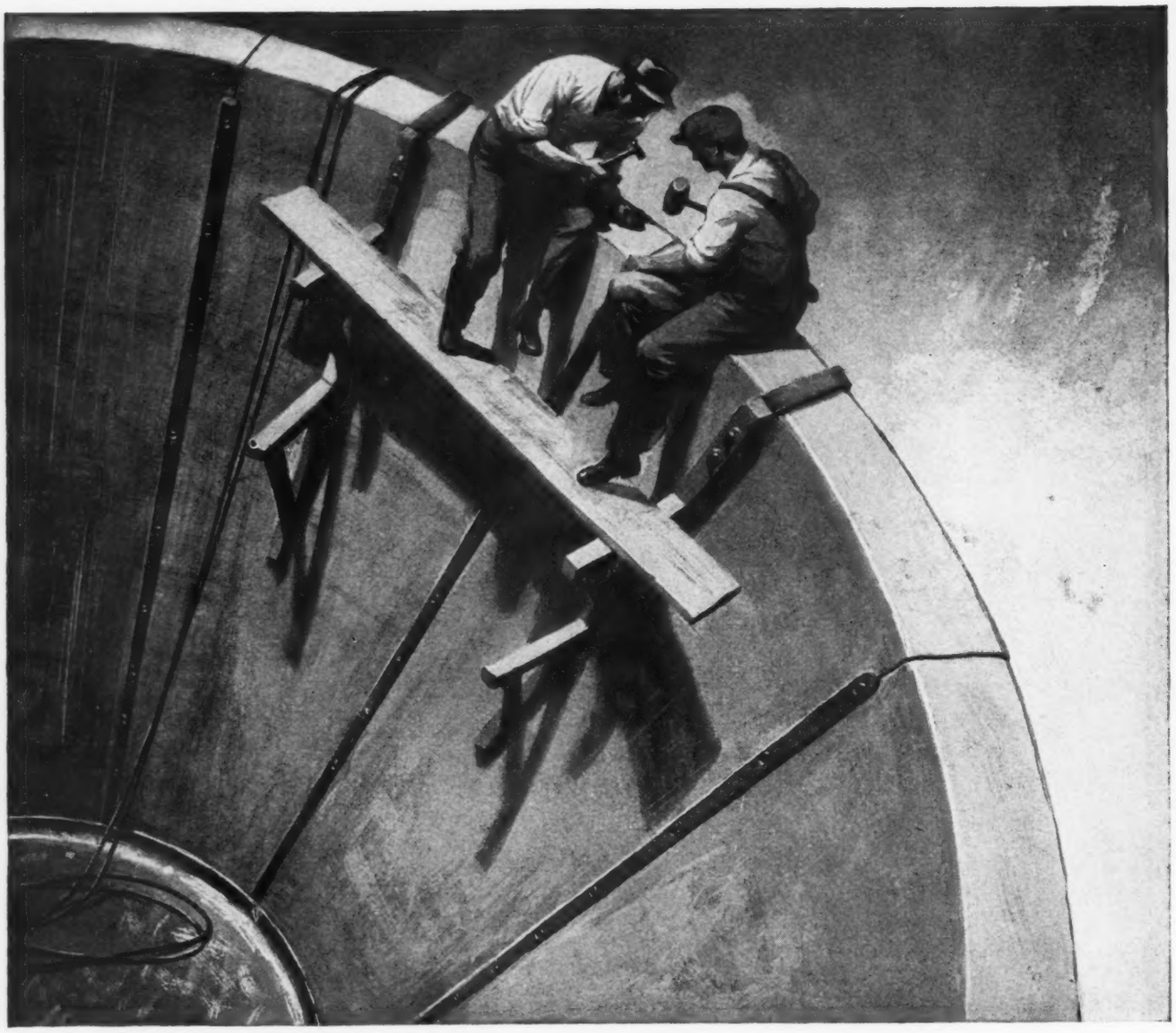
This is the statement of a dyehouse boss in a large Eastern mill. "You see," he continued, "all this equipment is made of your ARMCO Stainless Steel. We know it is attractive and does a good job. Customers who inspect our plant get a pretty convincing picture of us. They realize we must turn out top-grade textiles with modern machines such as these."

Yes, textile equipment made of ARMCO Stainless Steels *does* impress customers favorably. But that is only part of the story. ARMCO Stainless equipment costs less in the long run. This rustless metal lengthens service life and reduces upkeep. There is no plating to wear off because the metal is solid stainless. The hard dense surface resists even the most penetrating dyes used in production of textiles.

Operating costs go down too. It's easy to change from dark to light colors. You save on cleaning time because boilouts are not needed. A good hosing down does the job. Dye solutions last at least two hours longer. ARMCO Stainless also holds heat longer.

If you use stainless steel equipment you will be glad to have the ARMCO folder entitled "Your Stainless Steel Equipment . . . Its Advantages and Care in Textile Processing." Write for a *free* copy. The American Rolling Mill Co., 3131 Curtis St., Middletown, Ohio.

ARMCO ARMCO **STAINLESS STEELS**



YOU CAN'T BEAT IT BECAUSE YOU CAN BEAT IT!

TELLURIUM LEAD takes plenty of punishment — and then comes back more full of fight than ever!

For this new alloy *work-hardens.* A tough lead to begin with, Tellurium Lead grows tougher when hammered, rolled, bent or stretched. *That means:*

1. Turnover points and joints are less subject to cracking.

2. Where vibration is excessive, buckling and creeping are cut down to a minimum.

3. Where heat changes are frequent and rapid, there is less danger of fracture.

Another advantage. Tellurium Lead is a high temperature lead. At elevated temperatures — those which approach the melting point of the metal — it exhibits a much improved resistance to corrosion by sulphuric and other acids. Thus, it makes for greater economy and safety in tank linings, heating coils and pipe lines.

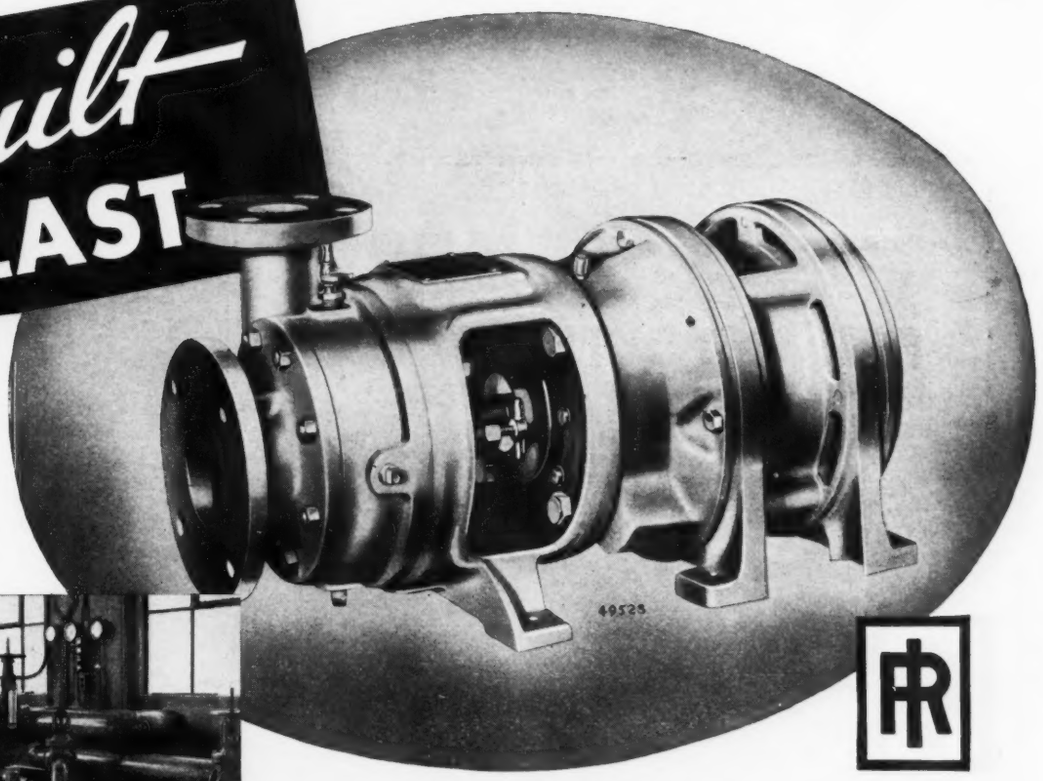
Tellurium Lead of our manufacture is time-tested St. Joe chemical lead, alloyed with a small quantity of tellurium. It gives the desirable advantages of this well-known chemical lead plus important new ones. Yet the cost is only a fraction of a cent more per pound than chemical lead. In sheets, pipe and coils.

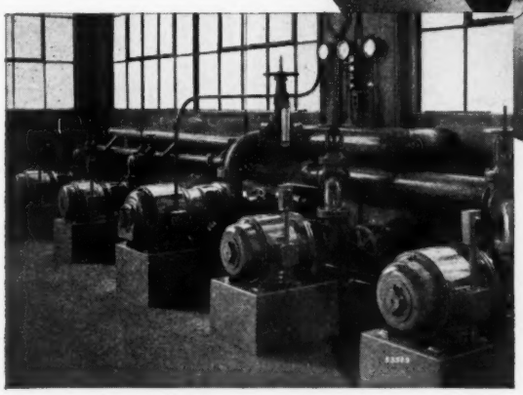
For further facts write to our nearest branch office listed below.

TELLURIUM LEAD

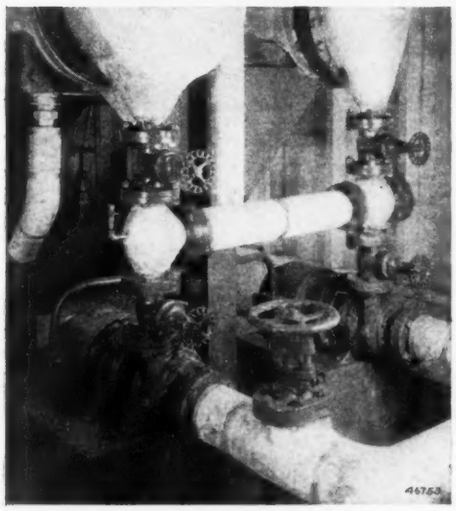
NATIONAL LEAD COMPANY—New York, Baltimore, Buffalo, Chicago, Cleveland, Cincinnati, St. Louis; National-Boston Lead Co., Boston; John T. Lewis & Bros. Co., Philadelphia; National Lead & Oil Co., Pittsburgh; Georgia Lead Works, Atlanta; American Lead Corp., Indianapolis; Master Metals, Inc., Cleveland; The Canada Metal Co., Ltd., Toronto, Montreal, Winnipeg, Vancouver.

Built TO LAST





Five Motorpumps used in connection with a refrigeration unit on process work.



Two Motorpumps which circulate hot water in heat exchangers for process work.

The Cameron

MOTORPUMP

An Ingersoll-Rand Product

A Quality Pump Throughout

The Motorpump is a compact centrifugal pump with built-in motor. Sizes and types are available for any pumping capacity from 5 to 1500 gals. per minute. It is remarkably compact and highly efficient, but more than that—it is dependable and durable.

Outstanding engineering and manufacturing facilities plus careful attention to details makes this possible. For instance, the Motorpump shaft is considerably heavier than that found in a standard motor. This means a smooth running pump and eliminates stuffing box troubles caused by shaft deflection. Also the thrust bearing has much greater radial and thrust capacity than the bearing in a standard motor. These and other details assure many years of trouble-free operation.

I-R branches and many dealers carry these pumps in stock. You can obtain prompt shipment.

Atlanta · Birmingham · Boston · Buffalo · Butte · Chicago · Cincinnati · Cleveland · Dallas · Denver · Detroit · Duluth · El Paso · Hartford · Houston · Kansas City · Los Angeles · Newark · New Orleans · New York · Philadelphia · Picher · Pittsburgh · Pottsville · Salt Lake City · San Francisco · Scranton · Seattle · St. Louis · St. Paul · Tulsa · Washington

Ingersoll-Rand

CAMERON PUMP DIVISION

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ALL DAY... AND FAR INTO THE NIGHT

to maintain Scully Service!

THIS business of working day and night is no mere talk! Every one of the eight Scully warehouses is on the job at all hours to provide the type of service that has made the Scully name famous. Do you need steel, steel products, copper, brass, tools, equipment or machinery? Perhaps we can help you out. We can still make immediate shipment of many items. Call us. You will get prompt, courteous attention—and every bit of co-operation we are able to give.

And if you don't have a copy of the handy 1941 Scully Stock List and Reference Book, ask for one — it's free.

SCULLY STEEL PRODUCTS COMPANY

Distributors of Steel, Steel Products, Copper and Brass

Warehouses at CHICAGO
ST. PAUL - MINNEAPOLIS
NEWARK, N.J.

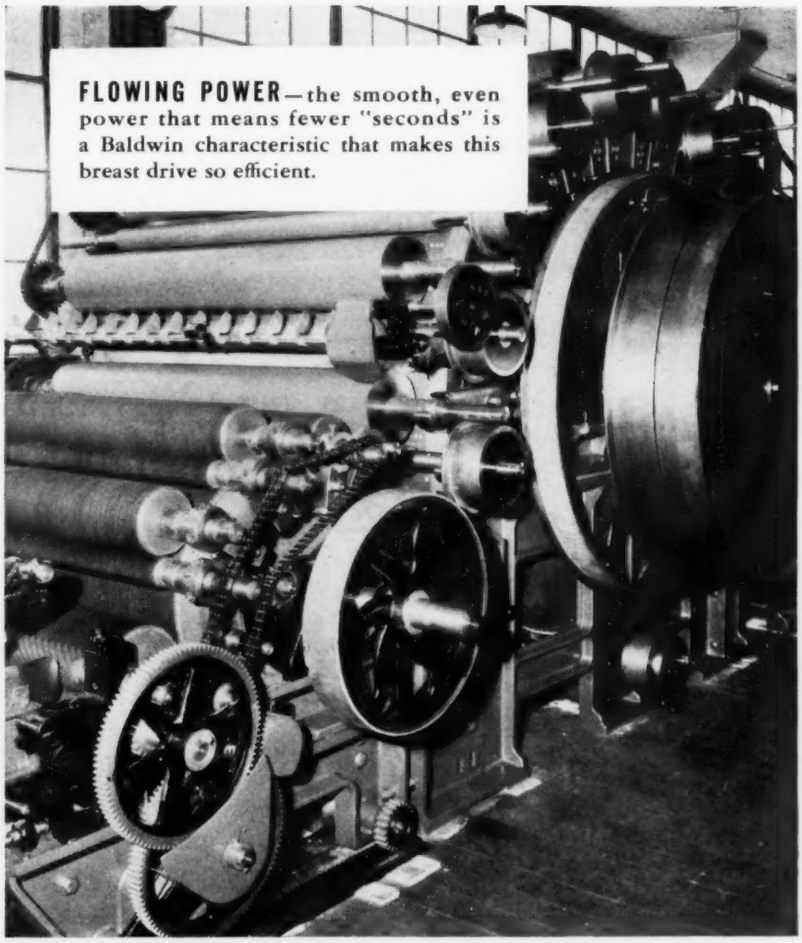
The Mark of Quality →

USS Scully Service

CLEVELAND · PITTSBURGH
BOSTON · BALTIMORE
ST. LOUIS

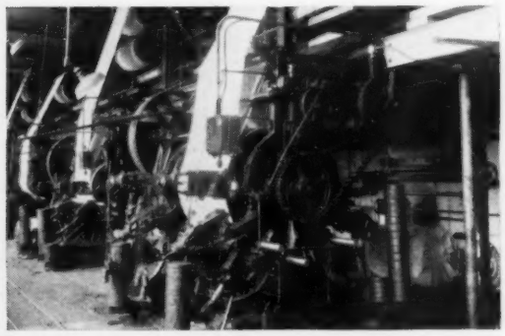
← *The Mark of Service*

UNITED STATES STEEL



FLOWING POWER—the smooth, even power that means fewer "seconds" is a Baldwin characteristic that makes this breast drive so efficient.

SLIPPAGE due to inefficient flat belts with subsequent high power loss is a thing of the past in this card room where Baldwin roller chain belts are now used throughout.



IT PAYS to put Baldwin roller chain belts on your printing machines! You get the positive, sure, smooth power transmission you want!

NOW IS THE TIME TO MAKE *and/or* SAVE MORE MONEY!

● Yes, now is the time you should make up your mind to get your share of a rapidly rising market! And one good way to help yourself do this is to change to Baldwin roller chain belts on drives throughout your plant!

Dozens of mill operators will tell you this is a good idea. Why? Because Baldwin roller chain belts bring 98.6% efficiency and *flowing power*—smooth, positive, shock absorbing power to machines where old-fashioned gear and belt drives waste your money through uneven transmission and loss of power that cause uneven finished goods, and too high operating costs!

And you'll be glad to know that it's easy to make this change over to Baldwin roller chain belts. They are easily installed on long or short centers—on existing drives . . . Call the Baldwin man. He's an "old hand" at applying Baldwin roller chain belts in textile mills of all sizes and types.

5 REASONS
WHY YOU SHOULD CHANGE NOW TO BALDWIN ROLLER CHAIN BELTS

1. Cleaner working conditions.
2. Better lighting in mill rooms.
3. Lower quantity of "seconds" produced.
4. More production per machine.
5. Lower operating cost.

BALDWIN
CHAIN BELTS

Please Note

Whether in relation to a defense problem or a commercial application, your inquiry will receive prompt attention. However, delivery of Baldwin products for the latter must be subordinate to the delivery of orders bearing priority distinction.

Please address inquiries to:

BALDWIN-DUCKWORTH
Division of Chain Belt Company
546 Plainfield St., Springfield, Mass.
Factories at Springfield and Worcester, Mass.

And there will always be a Textile World to serve this *basic* industry and the manufacturers who sell to it.

Textile World

NOW IN ITS 73RD YEAR OF SERVICE TO THE TEXTILE INDUSTRY

330 West 42nd St., New York, N.Y.

BANISH "Factory Film"

THE CAUSE OF FACTORY FILM
The dust, dirt and soot that settle on the walls and ceilings of industrial buildings cut down the amount of reflected light. The yellowing of inferior mill whites contributes to it. "Factory film" decreases workers' efficiency, makes frequent repainting necessary.

—with DU PONT MILL WHITE ENAMELS!

▶ Du Pont Mill Whites rid your plant of "factory film" because their hard, tile-like surfaces offer no foothold for dirt and dust. These finishes are easy to wash, easy to keep clean. They resist yellowing, checking, and cracking.

Du Pont Mill Whites give workers brilliant, lasting light reflection. A well-lighted, clean-looking plant helps build morale, ups efficiency. Paint with a high reflection value means reduced eyestrain and nervous tension, actually helps cut down accidents. Today, with stepped-up production schedules, Du Pont Mill Whites more than pay their way!

Du Pont makes a mill white for every industrial need. DULUX Mill White gives the finest possible job—lasting whiteness, and greatest durability. The exclusive DULUX formula means excellent gloss retention, fast application, and resistance to yellowing.

Use DULUX High-Hiding Mill White for one-coat jobs. With it, the paint crew goes down the line once, production returns to normal. You save on paint and on labor.

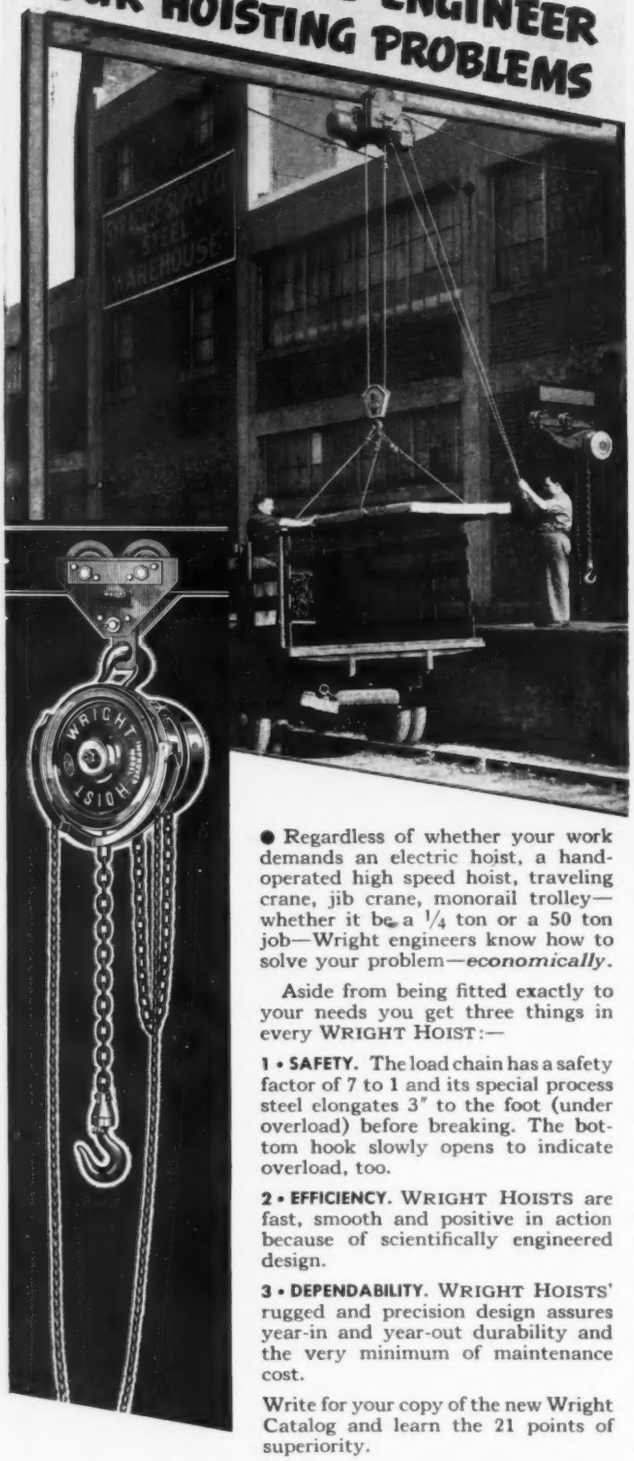
DULITE Mill White is the outstanding mill white of the orthodox type. Its lower first cost and excellent performance have made it the standard in hundreds of factories. It is made in Gloss and Eggshell Finishes. Fight "factory film" the modern way —with Du Pont Mill White Enamels. E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Dept. T-111, Wilmington, Delaware.

DU PONT

PAINTS

FOR FACTORY MODERNIZATION

LET WRIGHT ENGINEER YOUR HOISTING PROBLEMS



● Regardless of whether your work demands an electric hoist, a hand-operated high speed hoist, traveling crane, jib crane, monorail trolley—whether it be a 1/4 ton or a 50 ton job—Wright engineers know how to solve your problem—*economically*.

Aside from being fitted exactly to your needs you get three things in every WRIGHT HOIST:—

1 • SAFETY. The load chain has a safety factor of 7 to 1 and its special process steel elongates 3″ to the foot (under overload) before breaking. The bottom hook slowly opens to indicate overload, too.

2 • EFFICIENCY. WRIGHT HOISTS are fast, smooth and positive in action because of scientifically engineered design.

3 • DEPENDABILITY. WRIGHT HOISTS' rugged and precision design assures year-in and year-out durability and the very minimum of maintenance cost.

Write for your copy of the new Wright Catalog and learn the 21 points of superiority.

Let Wright engineer your hoisting and crane problems. Work through the Wright distributor in your city. You'll find him listed in the classified telephone book.

WRIGHT MANUFACTURING DIVISION
YORK, PENNSYLVANIA

In Business for Your Safety

AMERICAN CHAIN & CABLE COMPANY, Inc.

Exalted we stand

—before the bequest of our fathers

The freedom to work, to strive, to produce—this is the obligation of a past that has made America great.

To the manifold tasks involved in the discharge of this trust, the Engineer bends his will, his skill, his experience and his vision so that production may flow in mounting measure to support those who risk the seas, the battlefields and the sky-flung devastation of an enslaving social order.

And beyond the hour of blood-wrested victory, he studies the readjustments for peace, reconciliation and the renewal of opportunities so that the plants he builds today can cater to the needs of a better tomorrow.

Engineers FOR 40 YEARS

J. E. SIRRINE & COMPANY

GREENVILLE • SOUTH CAROLINA

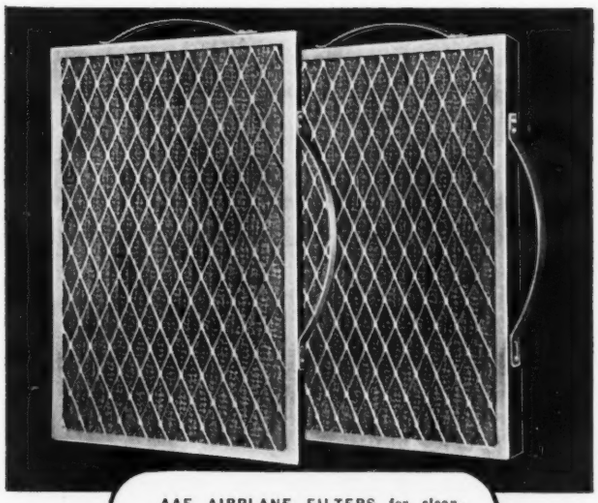
INDUSTRIAL PLANTS • PLANS AND DESIGNS • POWER

LOCATION STUDIES • WATER SUPPLY AND TREATMENT

ELECTRO-MATIC and
AMERICAN AUTOMATIC
filter assembly lines

AMERICAN AIR FILTERS FOR NATIONAL DEFENSE

ROTO-CLONE GRINDING BENCH with AIRMAT PL after cleaner for finishing airplane propellers.



AAF AIRPLANE FILTERS for cleaning intake air to engines.

Assembly lines such as those shown above crowded with Automatic and Electro-Matic filter sections for new industrial buildings, give some idea of the important part that air cleaning and dust control play in National Defense. In plants where tanks, planes, trucks, guns and shells—in fact, wherever the countless defense materials are made—clean air plays a vital role in keeping production moving at unprecedented speed.

Men who operate machines must breathe freely of clean, wholesome air, and those machines must be protected from the ravages of abrasive dust, that deteriorates the best of equipment or breaks down accurately finished surfaces.

American Air is proud of its important part in the national defense effort—AAF air filtration and dust control equipment delivered to manufacturing plants directly engaged in making war materials comprises approximately 80% of our output.

For more than twenty years, The American Air Filter Co. has pioneered the development of air filtration and dust control, and is today the world's largest manufacturer of air cleaning equipment. Write for descriptive literature on Roto-Clone process dust control—and AAF filters for eliminating atmospheric dust, welding fumes and oil vapors.

AMERICAN AIR FILTER CO., INC.
Incorporated
302 Central Avenue, Louisville, Ky.
In Canada: Darling Bros., Ltd., Montreal, P.Q.

THE SYMBOL AAF OF CLEAN AIR

AMERICAN AIR FILTER CO., INC., LOUISVILLE, KY.

LUBRIPLATE LUBRICANTS SPEED-UP DEFENSE PRODUCTION

MORE and more production demanded by the needs of National Defense, means keeping textile machinery running continuously at top speed. Every slow-down to cool overheated bearings, every stop for repairs or service, means time and output lost that can never be made up. Proper lubrication therefore is vital.

To keep the wheels of industry going full-speed ahead, LUBRIPLATE Lubricants provide advantages not obtained from ordinary oils and greases. LUBRIPLATE Lubricants definitely arrest progressive wear. The load-bearing LUBRIPLATE Film on shafts, gear teeth and all bearing surfaces reduces friction . . . wear . . . heat . . . noise . . . and power consumption and gives complete protection against rust and corrosion. Reports from users everywhere show how LUBRIPLATE Lubricants can help you speed up production.

LUBRIPLATE DIVISION
FISKE BROTHERS REFINING CO.
Newark, New Jersey Toledo, Ohio
Dealers from Coast to Coast

ONE NEW BEARING IN 5 YEARS

Two or three bearing replacements a month were once common practice in a Rhode Island mill. But since they adopted LUBRIPLATE five years ago they have had to replace only one ball bearing since.

INCREASES OPERATING TIME

The cost of operating 2,500 Quiller Spindles in a Tennessee mill has been cut in half by using LUBRIPLATE No. 2. Because the oil previously used quickly dried out and carbonized, the mill took advantage of the shut-down periods for re-oiling to clean the whirls of accumulated yarn. Too much working time was lost and needless cleaning-up done, so frequently was re-oiling necessary. Now, using LUBRIPLATE, stops are made only when it is necessary to clean away yarn, about once every six weeks and in most instances re-lubricating even then is not necessary. Also, spindle sticking has been almost entirely eliminated.

CORRECTED BEARING WEAR

A cotton mill superintendent writes that Ball Bearing LUBRIPLATE has saved them much money in bearing replacements. LUBRIPLATE No. 3 not only corrected bearing wear, but outlasts many times the oil previously used.

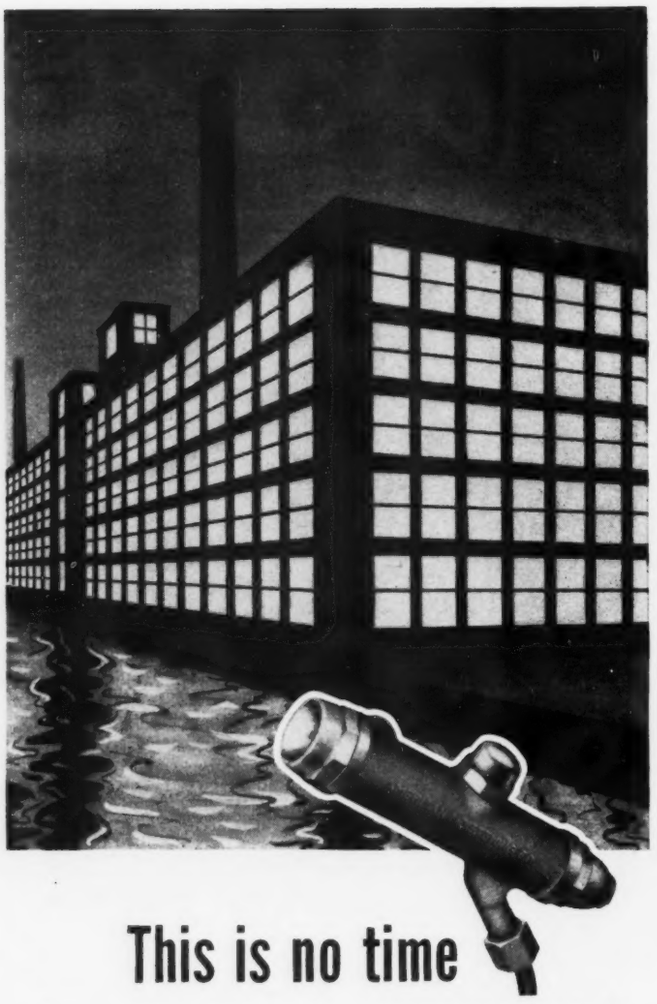
NO REPAIRS IN TWO YEARS

"I'll use LUBRIPLATE as long as it is made." So says a superintendent of carding. Since he started using LUBRIPLATE No. 100 in comb boxes two years ago, no repairs have been required. Boxes run cool and chatterless. On plain bearings opposite comb boxes they apply LUBRIPLATE every three days, where before they had to re-oil every day.

7 FACTS ABOUT LUBRIPLATE

1. *LUBRIPLATE produces an ultra-smooth, wear-resisting bearing surface.* 2. *LUBRIPLATE reduces friction, thus lowering maintenance and power costs.* 3. *LUBRIPLATE resists rust, corrosion and pitting.* 4. *Most LUBRIPLATE products are white.* *LUBRIPLATE assures clean lubrication.* 5. *LUBRIPLATE outlasts ordinary lubricants many times.* 6. *LUBRIPLATE is economical—a little goes a long way.* 7. *LUBRIPLATE is available in fluid and grease types for every need.*

LUBRIPLATE
THE MODERN LUBRICANT
THAT ARRESTS PROGRESSIVE WEAR



This is no time for MANUAL CLEANING!

The mill running full time on defense orders has literally no time – and no extra hands – for daily cleaning of humidifying equipment.

Just as though it were developed for the present emergency, the Amco No. 4 Self-Cleaning Atomizer is on full time duty in many important mills, delivering its finely atomized spray without drip or feathering down, and completely ending the nuisance of manual cleaning.

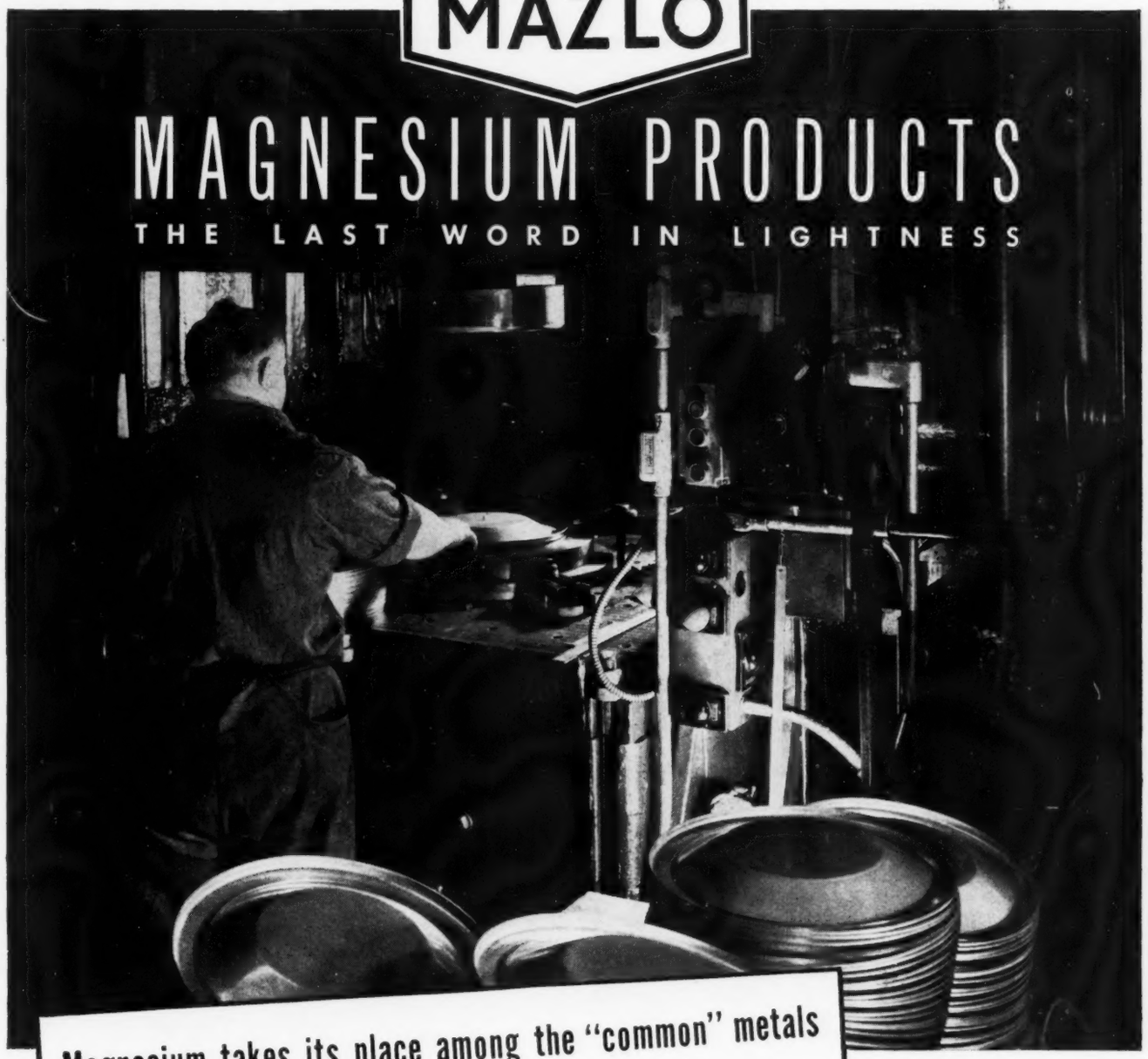
Can these highly efficient atomizers save you man-hours, and boost humidity to meet higher demands? Let the Amco Engineer work with you to find out. American Moistening Company, Providence, R. I., Atlanta . . . Boston . . . Charlotte.

Amco HUMIDIFICATION

MAZLO

MAGNESIUM PRODUCTS

THE LAST WORD IN LIGHTNESS



Magnesium takes its place among the "common" metals

MAZLO factories are doing today what they've dreamed of doing for years. They're in mass production on many Magnesium Alloy products, fabricating and helping other manufacturers produce in tremendous quantities.

What fabricators are learning in this push for production will later profit every peacetime user of Mazlo Magnesium products. Improved manufacturing methods and reduced costs will increase the usefulness of Magnesium in every commercial form. Many new applications are indicated.

Magnesium has earned wide acceptance because of the unusual advantages it offers. As metal again becomes generally available for non-defense uses, consumers and manufacturers alike will be able to profit fully by using this lightest of lightweight metals in an ever widening circle of applications.

MAZLO

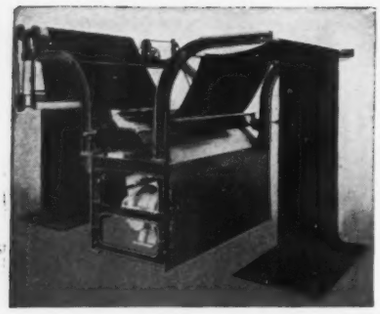
REG. U.S. PAT. OFF.

DEFENSE COMES FIRST

Magnesium, today, is "All Out for Defense." Civilian users have had to find substitutes. But we have not turned our backs. American Magnesium Corporation is increasing its fabricating facilities at a rate many times that required by normal peacetime markets. When the emergency is past, there will be an abundance of these lightweight products for all users. Sales Agent for Mazlo Magnesium products: Aluminum Company of America, 1705 Gulf Building, Pittsburgh, Pa.

AMERICAN MAGNESIUM CORPORATION

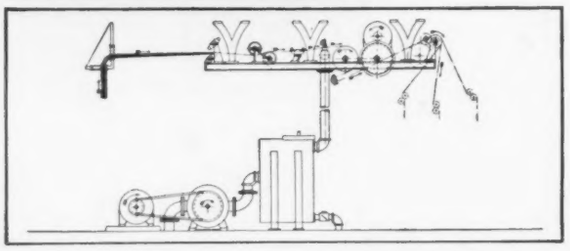
Subsidiary of Aluminum Company of America



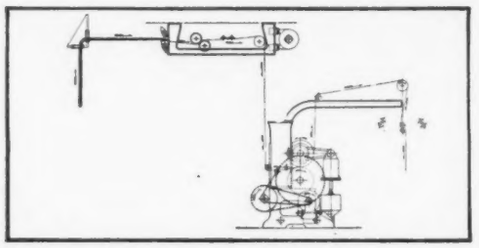
TWO EFFICIENT METHODS OF EXTRACTING WATER OR ACIDS FROM YOUR FABRICS

Gessner offers you two efficient methods of extracting water or acids. One is by means of a vacuum extractor. The second is by means of hydraulic rubber squeeze rolls.

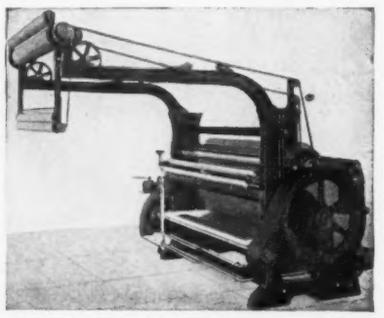
Both methods compared to centrifugal removal, have the advantage of uniformly extracting water or acid from the cloth in open width to eliminate wrinkles and creases. Each method has its own peculiar advantages and disadvantages according to particular conditions. We will be glad to discuss which method best fits your problem.



TOP: Gessner Vacuum Extractor.
LOWER: Extractor and Scutcher shown in combination.



RIGHT: Squeezing Machine.
BELOW: Gessner Squeezing Machine and Scutcher in combination.



VACUUM EXTRACTORS, GIGS, SCUTCHING MACHINES, SPOT PROOFING MACHINES, BRUSHES, PRESSES, DECATING MACHINES, DECATING APRONS, NAPPERS

IMPROVED CLOTH FINISHING MACHINERY

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machine and hand knitting

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for

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OUTERWEAR
HOSIERY
UNDERWEAR

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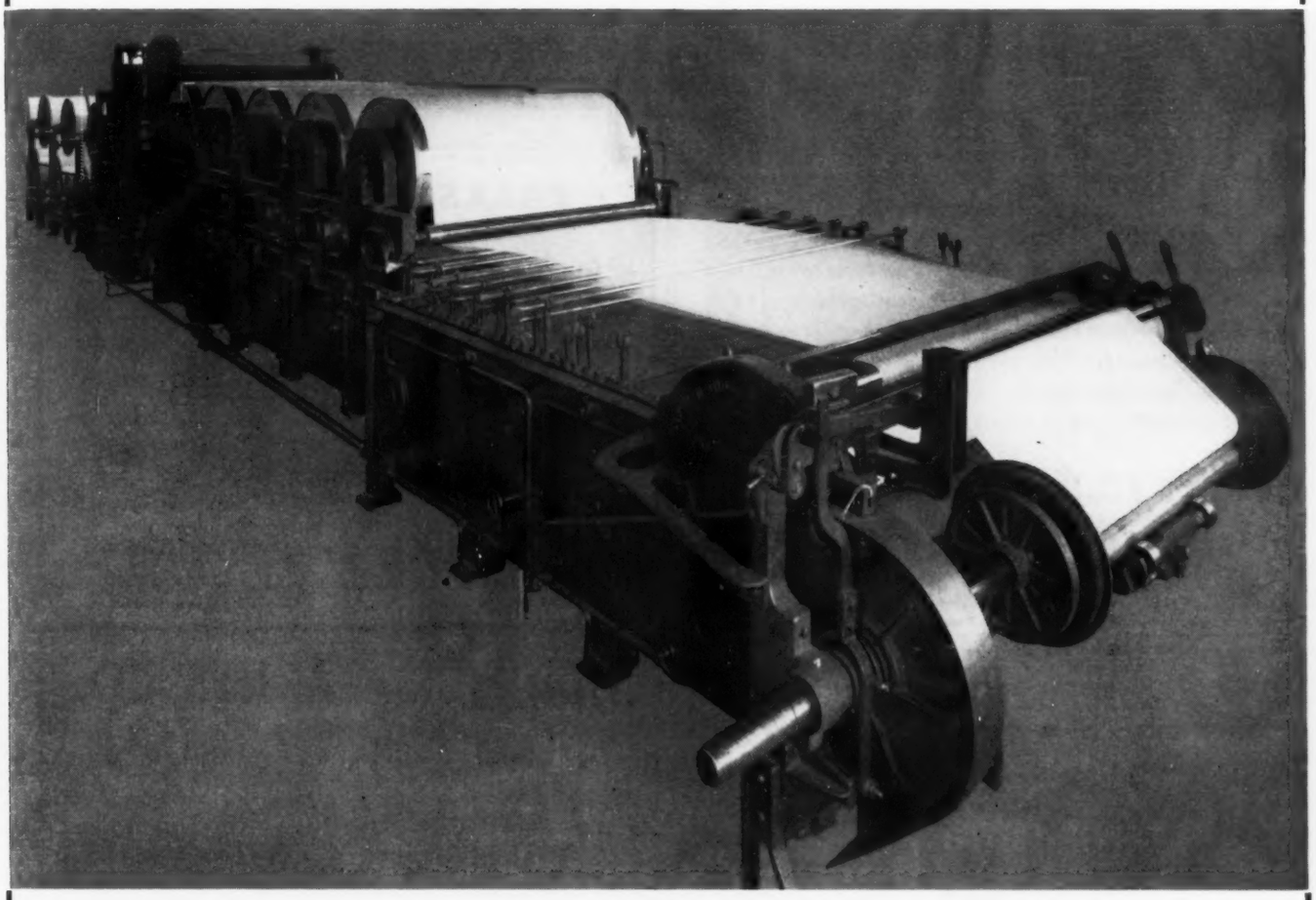
Complete color assortments

American Woolen Company

225 Fourth Avenue New York

COCKER HIGH SPEED SLASHER FOR COTTON YARNS



Illustrated is the New Cocker Nine Cylinder High Speed Slasher for Cotton Yarns.

Machine has Nine 30″ diameter Cylinders with Rotary packless joints. Graduated Drive permitting speed changes without over-run on Beams or strain on yarn. Patented Automatic Friction Control—Finger Tip Tension Control—Syphon Condensate removal with Individual traps on each cylinder. Heavy vibration eliminating Frames. Counter Clocks for instant Stretch Calculations—Cut Marker—Cut Marker Indicators—Speed Tachometers—Combs and Comb adjustments—Motor and Steam fittings.

For better weaving Warps made efficiently and economically use COCKER WARP PREPARATION EQUIPMENT.

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GASTONIA, NORTH CAROLINA

1873 TO 1941

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What is the best raceway for the traveler on spinning and twisting every type of yarn in every fibre? . . . Answering that question is a man-sized job! At least we believe so, and that's why we've devoted our entire efforts for 68 years to determining the BEST ring for each operation. From experience with millions of rings in thousands of mills, we offer you DIAMOND FINISH designs (including various exclusive, patented styles) that are TESTED and TOP-PERFORMING for each of your processes.

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Makers of Spinning and Twister Rings since 1873

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FILLING WINDERS

→ REDUCE LOOM REPAIRS
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Don't hold down your looms by poor Filling. Provide your weave room with constantly uniform Filling of maximum yardage, and secure higher loom efficiency with reduced maintenance and repairs.
Send us a small supply of your yarn for Test Wind Report and Catalog.

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Clean Top Rolls
No Black Yarn

Get these results by using NON-FLUID OIL in roll necks of spinning frames. Stays where applied instead of creeping out like ordinary oils to rot roll covers and stain yarn.

NON-FLUID OIL saves it own cost many times over through preventing blackened yarn. Saves still more by outlasting oil 3 to 5 times.

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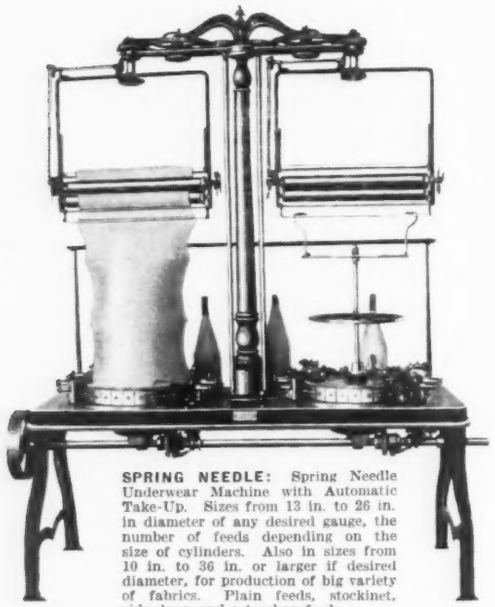
meet the need for Speed—
for Quality and Low Cost



SPRING NEEDLE: Spring Needle Underwear Machine with Automatic Take-Up. Sizes from 13 in. to 26 in. in diameter of any desired gauge, the number of feeds depending on the size of cylinders. Also in sizes from 10 in. to 36 in. or larger if desired diameter, for production of big variety of fabrics. Plain feeds, stockinet, eiderdown and astrachan feeds.

CRANE Knitting Machines meet the demands of rapidly changing patterns and styles. Their middle name is *versatility* . . . plus smooth, fast running operation that eliminates expensive stops. Among their exclusive features are Patented hardened Wing Burr Wheels and patented Thread Stop Motion. There's many a Knitting Mill in which batteries of Cranes are the mainstay of production.

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—and how . . . just ***WRITE***

CRANE Improved Automatic
3 Colored

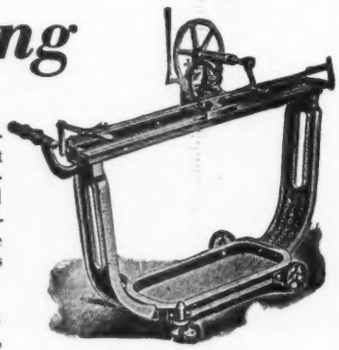
Improved Automatic 3 Colored Plain Stripes. Made in sizes from 7⅝ in. to 20⅝ in. inclusive, of any desired gauge. Measurements are back to back of cylinder needles. Knit fabrics for bathing suits, theatricals, athletic goods. Crawford stop motion applied when requested.

1870 **CRANE** 1941

MANUFACTURING CO.
LAKEPORT, N. H.

Spring Latch Needle
KNITTING MACHINERY

Perfect Seams for Finishing



EVEN when operated by the lowest paid help, the Dinsmore No. 1 Hand Power Portable Railway sewing machine provides faultless seams.

This machine does its work anywhere, being easily moved about at will. It is an efficient practical means of joining the ends of cloth for its passage through such finishing operations as shearing, dyeing, printing, etc.

These machines will sew wet or dry, thick or thin goods, and are built in different lengths for any width of cloth.

The seam can be sewed very near the edge and is easily removable. *The edges come out all even.* Write for complete catalog.

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No. 1 See also TEXTILE YEARBOOK and CONSOLIDATED CATALOG

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Manufacturers of

Quality LATCH and SPRING-BEARD

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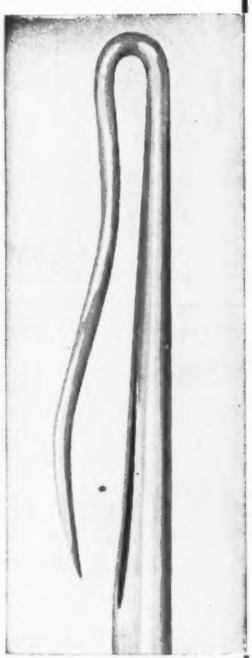

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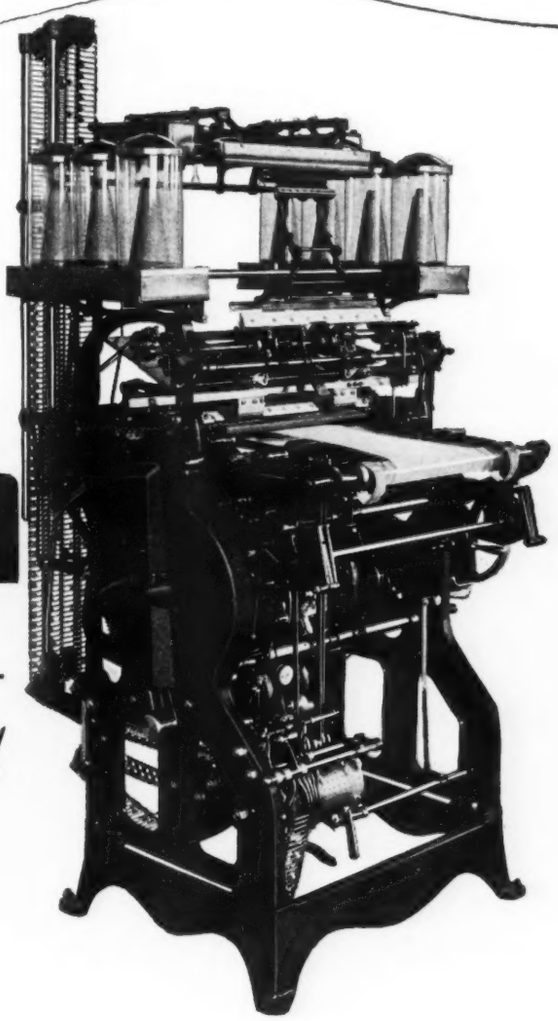
***Manufacturers of* THE FAMOUS COOPER CIRCULAR SPRING-NEEDLE RIB KNITTING MACHINES**

SILK SUBSTITUTES ARE NO PROBLEM FOR THIS MACHINE

Many of the silk substitutes greatly increase the difficulty of transferring the legs to the footer . . . creating a serious problem for some manufacturers. But for the Wildman Single-Head, Single-Unit Machine they are *no problem at all!* Here, literally, is the "machine of the hour"! It handles the finest gauge synthetics or cottons with absolute uniformity and assures perfect matching of legs and feet because it knits the entire stocking in one continuous operation. It will pay you to get complete information about this remarkable machine. Write, wire or telephone to

WILDMAN MFG. CO., NORRISTOWN, PA.



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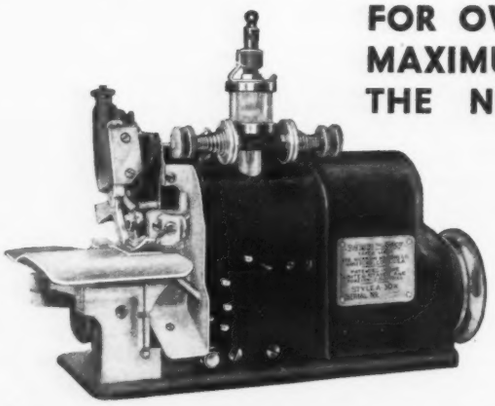
Single-head, single-unit full-fashioned hosiery machine

Established 1838 **MERROW** **Incorporated 1894**



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200 VARIETIES FOR 200 PURPOSES

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for seamless hosiery knitting

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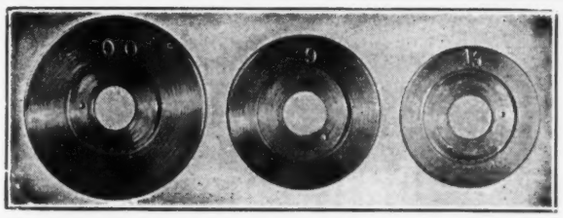
John: Let's order new Douglas Spunray Gum for warp sizing spun rayons, spun acetates and mixtures.

Understand protects yarns like standard starches yet desizes completely in soap and water.

Jim



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Our hardened steel wheels will last indefinitely, and, because of their hardness, will not cut or become nicked and therefore damage your silk. These wheels are accurately made. The size is correct and the finish of the face of the wheel is as smooth as polishing can make it.

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EST. 1874

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For Circular, Full Fashioned, Tricot and Milanese Knitting Frames, also Narrowing, Stand, Transfer Points and Welt Hooks for Full Fashioned Machines; Slides, Sinkers, Jacks, Guides or Flat Eyes, Sley and Milanese Points, Transfer Points or Quills, etc.

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WHETHER SILK OR NYLON
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ALONE OR IN ANY COMBINATION
THERE IS A

DuraBeau* **FINISH**
TO CHARM THE EYE
AND SPEED THE SALE

*REG. IN U. S. A. AND CANADA

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THIS efficient transfer remover takes out every trace of trademarks—even stubborn ones. Works fast, leaves silk hosiery in perfect condition for stripping and redyeing. Hundreds of dyers keep Laureltex bath in readiness to reclaim production and style seconds . . . keep inventory losses down to minimum. Send for a trial order of Laureltex #340 today and give your color seconds a fresh start.

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SAVE WITH IMPROVED WASHING ACTION

TRY a Metso Detergent on a stubborn cleaning job in your mill and see the difference. Take, for instance, back gray washing. Metso removes all the loose dyes and leaves the back grays soft and absorbent. Metso-washed grays last longer.

One outstanding function of Metso Detergents is the ability to prevent removed dirt from again depositing itself on the clean cloth. May we tell you more about this unique Metso advantage? No obligation.

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SODIUM METASILICATE AND SESQUISILICATE

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CAN AIR-CONDITIONING COILS BE CLEANED WITHOUT HARD WORK?

ANSWER: "YES . . . a thousand times yes!" That's what the Maintenance Foreman of one Southern mill will tell you!

Here . . . cleaning coils and fins of air-conditioning equipment formerly required several hours' brushing and scrubbing. Now . . . the job is simply a matter of applying a recommended Oakite solution with the Oakite Steam Gun. Oil, dirt and other accumulations are thoroughly, speedily removed. Time, money and man-power are saved . . . factors which any mill rushed with Defense Orders will appreciate!

Find out what Oakite steam cleaning can do for you. Write today for FREE booklet!

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MATERIALS & METHODS FOR EVERY CLEANING REQUIREMENT

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MEON "T" for conditioning cotton yarns is more than a penetrant or wetting agent. MEON "T" is hygroscopic, and by virtue of its property of breaking down surface tension, insures rapid absorption. MEON "T" permanently sets the twist and removes the kinks. Any amount of water can be imparted and retained by the use of MEON "T". Therein lies a *tangible value* for the manufacturer. . . .

Can be Used in
ANY CONDITIONING MACHINE

1 gallon MEON "T" to 99 gallons water

- INSURES SMOOTH WEAVING
- INCREASES BREAKING STRENGTH
- A RUST INHIBITOR
- WILL NOT AFFECT THE BOBBINS
- ECONOMICAL
- EFFICIENT

Use it on your Tyeing-in Machine

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ESTABLISHED 1874

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(See ¶ on Box Numbers.)

POSITIONS WANTED (full or part-time salaried employment only), ½ above rates.

PROPOSALS, 50 cents a line an insertion.

INFORMATION:

BOX NUMBERS in care of any of our New York, Chicago or San Francisco offices count 10 words additional in undisplayed ads.

DISCOUNT of 10% if full payment is made in advance for four consecutive insertions of undisplayed ads (not including proposals).

DISPLAYED—RATE PER INCH:

The advertising rate is $5.50 per inch for all advertising appearing on other than a contract basis. Contract rates quoted on request.

AN ADVERTISING INCH is measured ⅞ inch vertically on one column, 3 columns—30 inches—to a page. T.W

NEW ADVERTISEMENTS received by 10 A. M. December 1st will appear in the December issue, subject to limitations of space available.

POSITIONS VACANT

SUPERINTENDENT required for Western Canadian Woolen Mill. Must be thoroughly experienced in mackinaws, pantings, tweeds, etc. State experience and salary expected in first letter, addressed to P-23, Textile World, 330 W. 42nd St., New York, N. Y.

SEVERAL MECHANICS WANTED, experienced on Komet machines (Scott & Williams-Bentley) able to make repairs, to change patterns, and to run shifts. Immediate opening. Exceptionally high salary, steady employment. Address applications with all details and references to P-30, Textile World, 330 W. 42nd St., New York, N. Y.

EXPERIENCED FIXER on Jenckes knitting machines, wanted. P-33, Textile World, 330 W. 42nd St., New York, N. Y.

A FULLY QUALIFIED MAN, to help select and report on machines for a small Cotton Weaving plant. Reply, stating fees, or salary for one month's work to P-35, Textile World, 330 W. 42nd St., New York, N. Y.

POSITIONS WANTED

OVERSEER—35 years experience silk, rayon and acetate warping, slashing and filling preparations on ribbons and broad fabrics offers services in either line. Go anywhere. PW-20, Textile World, 330 W. 42nd St., New York, N. Y.

NARROW FABRICS, Position Wanted as superintendent, non-elastic tapes, heavy webbing, elastic fabrics. Experience includes all departments. PW-25, Textile World, 330 W. 42nd St., New York, N. Y.

BOSS WOOLEN CARDER, open for engagement. First class man. PW-37, Textile World, 330 W. 42nd St., New York, N. Y.

BOSS WORSTED CARDER. Open for engagement. PW-39, Textile World, 330 W. 42nd St., New York, N. Y.

PLANT MANAGER

Experienced plant and production manager in the dyeing, printing and finishing field, seeks new connection with progressive organization as plant manager or superintendent of production. Would prefer position as contact man between the New York market and mill on production troubles and adjustments. At present employed. Experienced with both northern and southern labor.

PW-987, Textile World
330 West 42 St., New York City

PROFESSIONAL SERVICES

PATENT YOUR IDEAS

send a Sketch or Model of your invention for

IDEAS

CONFIDENTIAL ADVICE

FREE CONSULTATION LITERATURE

Z. H. Polachek

1234 BROADWAY NEW YORK

PATENT ATTORNEY ENGINEER

U. S. Pat. Off. records searched for ANY Invention or Trade Mark

LANCASTER, ALLWINE & ROMMEL

Booklet — "General Information Concerning Inventions & Patents" and "Fee Schedule" sent without obligation.

Established 1915

Patents—Copyrights—Trade-Marks

Suite 448, 815—15th St., N.W., Washington, D. C.

Over Forty Years of Dependable and Confidential EMPLOYMENT SERVICE for textile mills, converters and selling houses requiring managers, superintendents, stylers, designers, salesmen, overseers, second hands, fixers, etc. 'Phone, wire or write us your personnel requirements.

CHARLES P. RAYMOND SERVICE, Inc.

Phone: Liberty 6547 **294 Washington Street, Boston, Mass.**

POSITIONS WANTED

TEXTILE ENGRAVING SUPERINTENDENT is available to install a plant and train an organization in a roller photoengraving process which has been in successful production for fifteen years, displacing die and mill and stippling on copper. Will augment your pentagraph shop. PW-31, Textile World, 330 W. 42nd St., New York, N. Y.

MANAGER with many years experience in the manufacture of Rayon and Silk fabrics, throwing and weaving, tiesilk and plaingoods, marquisettes, shaft and jacquard work, open for position as mill executive or contact man between sales office and mill. For detailed qualifications and references address PW-32, Textile World, 330 W. 42nd St., New York, N. Y.

SUPERINTENDENT. Woolen Blending Carding and Spinning, desires connection. Thoroughly experienced. PW-38, Textile World, 330 W. 42nd St., New York, N. Y.

LEGAL NOTICE

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

Of Textile World, published monthly at Albany, N. Y., for October 1, 1941.

State of New York)
County of New York (ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared D. C. McGraw, who, having been duly sworn according to law, deposes and says that he is the Secretary of the McGraw-Hill Publishing Company, Inc., publishers of Textile World, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, McGraw-Hill Publishing Company, Inc., 330 West 42nd St., N. Y. C. Editor, Douglas G. Woolf, 330 West 42nd St., N. Y. C. Managing Editor, William B. Dall, 330 West 42nd St., N. Y. C. Business Manager, William Buxman, 330 West 42nd St., N. Y. C.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) McGraw-Hill Publishing Company, Inc., 330 West 42nd St., N. Y. C. Stockholders of which are: James H. McGraw, 330 West 42nd St., N. Y. C. James H. McGraw, Jr., 330 West 42nd St., N. Y. C. James H. McGraw, James H. McGraw, Jr., and Curtis W. McGraw, Trustees for: Harold W. McGraw, James H. McGraw, Jr., Donald C. McGraw, Curtis W. McGraw, 330 West 42nd St., N. Y. C., Edwin S. Wilsey and Curtis W. McGraw, Trustees for James H. McGraw, 3rd, Madison, N. J. Curtis W. McGraw, 330 West 42nd St., N. Y. C. Donald C. McGraw, 330 West 42nd St., N. Y. C. Anne Hugus Britton, 330 West 42nd St., N. Y. C. Mildred W. McGraw, Madison, N. J. Grace W. Mehren, 73 No. Country Club Drive, Phoenix, Ariz. J. Malcolm Muir & Guaranty Trust Co. of New York, Trustees for Lida Kelly Muir, 140 Broadway, N. Y. C.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contains not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the twelve months preceding the date shown above is. (This information is required from daily publications only.)

D. C. McGRAW, Secretary,
McGRAW-HILL PUBLISHING COMPANY, INC.

Sworn to and subscribed before me this 29th day of September, 1941.

[SEAL] H. E. BEIRNE,
Notary Public, Nassau County, Clk's No. 93, N. Y. Clk's No. 974, Reg. No 2-B-609.
(My commission expires March 30, 1942)

LEGAL NOTICE

WANTED

Additional Wanted Advertisement on Page 220

WANTED

24 Medium weight COTTON LOOMS (12 R.H.—12 L.H.) loose reed, 42" reed, double-barrel or plain dobbies, 4 x 4 or 4 x 1 shuttle-boxes.

Also following equipment for same:

CYLINDER SIZING MACHINE

BEAMING FRAME

CONE WINDER (40 to 60 spindles) (Skein to cone)

FILLING BOBBIN WINDER (Skein to bobbin) (30 to 40 spindles)

Small FINISHING RANGE for starching and finishing.

THREE-BOWL HOT CALENDER

FOLDING or PLAITING MACHINE

All machines motor-driven.

State: Age, full specification, condition, location and price for cash.

Reply to W-36 Textile World
330 W. 42nd St., New York City

WANTED

REX or ECONOMY BALING PRESSES

AND OTHER MAKES HAND OR POWER

Please give full particulars

Interested in Tiering Machines and Chain Hoists

N.Y. MACH. CO. 17 W. 20th St. N.Y.

No "Bottleneck" here!

READY-TO INSTALL USED QUALITY TEXTILE MACHINERY FOR QUICK DELIVERY FOR THE PLANT EXPANSION DEMANDED BY NATIONAL DEFENSE

1—48" Farmer 6-bowl Calender
1—50" Perkins 3-roll Hydraulic Calenders, Chrome Plated Rolls
1—50" Van Vlaanderen 3-roll Calender
2—sets 3-cyl. Furbush Woolen Cards 48" x 60" with camel back feeds and Barker condensers
1—60" Van Vlaanderen Doubling, Tubing & Measuring Mche.
1—set of 16 Textiles 23" x 60" Dry Cans, vertical frames
1—set of 29 Textile Tinned Iron Dry Cans, 23" dia. x 69½" face
1—set of 23 Granger Cooper Dry Cans, 23" dia. x 88" face with horiz. frames
1—150 yd. Kenyon Return Tenter Dryer, 65" opening
1—40 yd. Kenyon Return Tenter Dryer, 80" opening
1—100 yd. Kenyon Return Tenter Dryer with P & S Housing with 26 to 89" opening
2—84" Proctor & Schwartz Loop Dryer
36—Phila Ladies Hosiery Drying-Forms with adjustable toe sizes 8½ to 11
150—Phila Ladies Hosiery Drying Forms with tables sizes 8½ to 11
1—Hurricane Loop Dryer, 7'8" wide x 34'2½" long x 6'3½" high, inside dimensions
1—20 lb. Rochester All Monel Metal Pocket Rotary Hosiery Dyeing Mach. mtr. dr.
1—50 lb. Smith Drum 4-pocket all Monel Metal Rotary Hosiery Dyeing machine, mtr. dr.
1—100 lb. Smith and Drum all monel metal 3-Pocket Rotary Hosiery Dyeing, mtr. dr.
1—28 stick Klauder, Weldon Skein Dyeing Mach. hoist type, copper lined
1—40" Weston Bronze Basket Extractor
2—42" Hercules, Stainless Steel Baskets, V-Belt, mtr. dr. Extractors with Timers and Safety covers
1—60" Van Vlaanderen Rub. Lined Extractor
1—40" Textile Ribbon Finisher with Quetch and Cans
1—60" wide, 3-cyl. 30" dia. Garnett, automatic with breast, chain driven workers, automatic feed, V-belt motor drive, 3/60/550 roller bearings, clothing good
3—Schultz Fulling Machines

10—20" dyl. Wildman Style FBS-S Circular Knitting Machines, equipped with FWT-12 end, duplex furnishing Wheel with 1,728—#18/15 Needles, ¾ H.P., G.E. Textile Mill Motor, 1800/1760 RPM, 440 volts, 60 cycle, 3 phase, A.C.
6—22" as above with 1,908—#18/15 Needles
5—23" as above with 1,922—#18/15 Needles
17—26" as above with 2,268—#18/15 Needles
1—23" Wildman 648 Needle, 8 feeds
1—26" Wildman 576 Needle, 8 feeds
80—42" R. S. Draper Model K Automatic Looms, 20 harness, mtr. dr.
12—72" C & K (4 x 4) Tapestry Looms with 130h Jacquards, mtr. dr.
12—92" C&K 4x1 Box Automatic Looms, 20 harness head, warp stop motion, mtr. dr.
10—92" C&K 4x4 Box Looms
4—120" C&K (4x4) 25 harness Looms
1—65" Van Vlaanderen Palmer
1—67" Morrison Palmer with 2-roll Quetch
1—65" Voelker Rotary Cloth Press
1—66" Gessner Rotary Cloth Press
1—8 color Van Vlaanderen Ribbon Printer
1—42" Rice, Barton & Fales, 7 color Printing Mche. with Dry Cans etc.
2—60" Smith & Furbush Shredders
1—43" Rice, Barton & Fales 8 color Printing Mach. with Dry Cans, etc.
1—54" Textile Mach. Co. 8 color Printing Mach. complete with 2—G.E., 35 HP motors, 220 V., 60 cyl., 3 ph. 415—1250 RPM
1—52" Waldron 12 color Printing Mach., complete with Westge slip ring, motor, 50 HP, V., 60 cyl., 2 ph, 870 RPM
1—57" Van Vlaanderen 3 Roll Quetch
1—78" P & W Model A, 2-blade Shear
1—Pair of 60" Squeeze Rolls
1—40' Textile Finishing Tenter Frame with Housing, with 115" opening
1—90' Butterworth Clip Tenter 50" opening, mtr. dr.
150—128 spindle Fletcher Double Deck Upstroke Twisters, 7" spindle spacing, each equipped with 2-3 HP motors and Fletcher oil well non-bendable type spindle and balloon separators

MACHINERY LIQUIDATING CO., INC.

31-33 WEST 42nd STR. NEW YORK CITY

DOMESTIC AND EXPORT CABLE ADDRESS "LIQUIDATE," NEW YORK

INSPECTORS . . . . . APPRAISERS . . . . . LIQUIDATORS

Specialists in OVERHAULED and GUARANTEED YARN WINDING and SPINNING MACHINERY

We also have for sale the following:

5—Brown & Sharpe 120 yd. Yarn Reels

1—Alfred Suter Motor Drive Yarn and Cloth Strength Tester

12—Bahnson Humidifiers

3—Alfred Suter Twist Testers.

Gaines Textile Machinery Co.

141 WEST 17TH ST.
N. Y. C.

FOR SALE

1—10 foot Tight Washer, rubber covered rolls, 18" diameter.
2—Morrison Dye Jigs, 60" face beam rolls tilting expanders.
4—Dry Cans, copper, 90" x 23".
1—American Laundry Extractor, 28" bronze basket, motor drive.
1—Lowell Slasher, 7 and 5 foot Cylinders, 67½" headway.
1—Lowell, 36 x 36, Size Kettle.
1—C. & M. Vertical Brusher, 56", 6 brushes.

Sole Agents for Smith Yarn Twist Tester

BAY STATE TEXTILE CO.
220 HARTWELL STREET • FALL RIVER, MASS.

FINISHING and DYEING MACHINERY FOR SALE

96—Perforated Nickel-Silver Beams (New) for Beam Dyeing
1—Set of 17-108" Copper Dry Cans with Syphon Traps
1—48" Leyland Scutcher
10—50" Shreiner Steel Rolls (Engraved)
5—50" to 56" Ceiling Folders
2—Butterworth Tenter Chains, Brass Bottom Opening 99
1—#2 Reeves Drive
12—Trucks for Copper Print Rolls
2—Rayer & Lincoln Power Sewing Machines
6—Mandrels for Print Rolls, "W" Bore
1—50" 5 Bowl Calender (Textile)
1—3½ Ton Kier—Center Vomiting
1—Booth Dry Feeder & Mixer
2—Butterworth Squeezers—Brass & Rubber 18" and 30"
5—Dinsmore Ry. Sewing Machines 40" to 96"
2—Rubber Rolls 1—75" 1—120"—16" Diam.
6—50" Iron Jigs
1—New Pin Chain for Hunter Tenter
1—66" Rubber Expander, 3 Rolls New-Raising Device
1—120" Drying Machine—35 Steel Tinned Cans on Ball Bearings
1—R B & F-7 Color Printing Machine 39"
1—30" Tenter Frame
1—60" Spiral Breaker
1—50" Brass Mycock Expander—3 Rolls
14—66" Dye Jigs—Monel Metal Lined
4—Sets of Fin Heaters, 2 and 3 Sections—(Grinnell)

MOTORS—GEARS—SILENT AND ROLLER CHAINS—VALVES—GENERAL SUPPLIES

TEXTILE AUXILIARIES
Home of the "Bulldog Expander"
Office and Warehouse: 15-17 Ormsbee Ave., Providence, Rhode Island

FOR SALE

2—Saco-Lowell 34" F-5 Hopper Feeders.
5—Kitson 34" Hopper Feeders.
1—Saco-Lowell 40" Finisher Picker, with carding beater.
1—Kitson Feed Table, 20 ft. long.
1—Saco-Lowell latest type automatic Rake Distributor.
1—Saco-Lowell reversible Distributor Apron to deliver to two breaker pickers.
2—Saco-Lowell Morton 16" distributor belts.
1—Saco-Lowell #2 Condenser with self contained fan.
2—Saco-Lowell #6 Condensers.
1—Sturtevant #7 Fan.
2—Screen sections for Saco-Lowell Vertical Opener.
36—deliveries Whitin Drawing, 4 del. heads, metallic rolls.
2—Saco-Lowell tape drive spinning frames, 2¾" gauge, 272 spindles each, with Saco-Lowell long draft.
3—Collins 184 spindle 3½" gauge, 2½" ring, tape drive Fancy Twisters.
5—Whitin 192 spindle twisters, 4½" gauge, 3½" ring, band drive, brass rolls.
2—Curtis & Marble 4 blade Shears for 45" cloth, with Type A rolling-up head.
18,000—Saco-Lowell band drive Spindles.

95 BRIDGE STREET **GEORGE F. LANGEVIN** LOWELL, MASS.

HOSIERY EQUIPMENT

USED OR REBUILT
Knitters: Ribbers: Loopers: Seamers: Boarding: Dyeing: Full Fashioned Hosiery Machines
Special attention to export trade

C. M. FRENCH
Commercial Trust Bldg., 15th & Market St.
Cable: Frenchtex-Philadelphia Philadelphia, Pa.

TEXTILE MACHINERY

USED OR REBUILT
Spinning—Weaving—Dyeing Finishing—Hosiery Knitting
Specialists in Export Trade

S. B. SCHWARTZ
1050 Constance St. New Orleans, La.
Cable: Maquintex—Code: Bentley's

HOSIERY MACHINERY

We carry the largest stock of good used and reconditioned equipment in the U. S. A. for seamless—Full Fashion—Dyeing and Finishing—Write for Catalogue.

MORRIS SPEIZMAN
508-514 W. Fifth St. Charlotte, N. C.

UNDERWRITERS FIRE PUMPS

5—1,000 GPM Centrifugal Fire Pumps with AC motors either 220-440-2200v.

TIDEWATER EQUIPMENT & MACHY. CORP.
305 Madison Ave. New York, N. Y.

WE OWN AND OFFER FOR SALE

2—**UNIVERSAL ROTO-CONERS:** 1—100 spindle, and 1—70 spindle units. Individually motor driven. Condition excellent.
1—**UNIVERSAL #40 WHIRLWIND WINDER,** 70 spindles; motor driven. Very fine condition.
11—84" reed space **DRAPER LOOMS** equipped with 16 harness Intermediate Heads, four-bank Stop Motion, Midget Feeler, Stafford Cutter, worm take-up. Ind. motor driven by 1 H.P. Motors. Excellent condition.
10000—New **SILVER KING 12"x36" SEAMLESS FIBRE ROVING CANS.**

A. F. FYANS
Textile Machinery
56 WATER ST. FALL RIVER, MASS.

FOR SALE

130—40" Draper Model K Dobby Looms
2—66" Cloth Doubling & Winding Machines
10—Foster #12 Winders, 100 spindles each
24—82" C. & K. Automatic Worsted Looms
50—82" Draper Automatic Worsted Looms
24—72" Draper Automatic Worsted Looms
1—I-R Twin Air Compressor: 11"x12" cylinders

J. H. WINDLE & COMPANY
231 So. Main St. Providence, R. I.
Tel. Gaspee 6464

FOR SALE

2—60" x 60" D & F waste cards, all iron.
3—60" S & F waste cards.
4—Tape condensers, for cards.
2—Woolen Spinning frames.
4—Shoddy pickers.
4—Ceiling condensers.
2—Schofield dusters.

H. B. LINCOLN, JR.
SWARTHMORE, DEL. COUNTY, PA.

FOR SALE

1—66" JUMBO TYPE GESSMER CLOTH PRESS

FRANK W. WHEELER
1837 E. Ruan St. Philadelphia, Pa.

LOOMS FOR SALE

48—"Very Best" **Crompton & Knowles** worsted looms 4 x 4 box—72 inches wide—motor driven with electrical warp stop motions. Looms are in excellent condition and are now running on upholstery and drapery jacquered fabrics. Can be inspected at

ALBERT J. BARTSON, INC.
314 East 6th St. Charlotte, North Carolina

Textiles play their part in DEFENSE ••

"CONSOLIDATED"

plays a leading part in BUYING and SELLING Used Equipment to save Textile Men time and Money

*Some one may want what you don't need — **SELL** thru "Consolidated"*

PRINTING

9—Rice, Barton & Fales Printing Machines, 40" to 64" in width.
2—Textile Fin. Co. 150-Gal. Copper Steam Jacketed Kettles, Tilting Devies, Agit.
3—Textile Fin. Co. 100-Gal. Copper Steam Jacketed Kettles, Tilting Device, Agit.
2—Textile Fin. Co. 70-Gal. Copper Steam Jacketed Kettles, Tilting Device, Agit.
4—Textile Fin. Co. Copper Steam Jacketed Kettles, 50, 40 & 30-Gals. Agitated.
1—Textile 3-Nip Grey Washer, 65", rubber on brass rolls.
2—Textile 8-Bowl Full Width Open Washers, rubber on brass rolls.
1—Textile Vat Ager.
1—Forcing Jack.
3—Premier 5" and 10" Colloid Mills.

2300—W-Bore Copper Print Rollers, 40" to 48" lg; 14" to 20" Circumference

FINISHING

2—Textile 90' Swing Tenter Frames, 50" wide, Butterworth Stainless Steel Clips, Equipped with 80' Sheet Rock Insulated Tenter Frame Housings.
1—Windsor & Jerauld 40' Tenter Frame, 54" wide; electric Openers.
2—Proctor & Schwartz and National Loop Dryers.
3—Butterworth Pin Tenter Dryers.
1—Morrison 68" Palmer Quetch Unit.
1—Textile 5-Roll Chasing Calendar, equipped with 10 Brass Rolls.
2—Butterworth & Textile 2 and 3-Roll Calendars, 40" and 50" in width.
5—Parks & Woolson 2-Blade 66" Shears, with list saving Device.
1—Set 28—Butterworth Copper Dry Cans, 23" x 130", vertical stack, syphon type.
1—Set 30—Butterworth Copper Dry Cans, 23" x 108", vertical stack, syphon type.
1—Set 6—Textile Copper Dry Cans, 72" dia. x 48" face.
1—Set Textile Copper Dry Cans, 60" x 50", vertical stack.
2—Sets Textile Copper Dry Cans, 30" x 50", vertical stack, 6 and 8 Cans.
2—Sets Textile Dry Cans, 84" dia., x 44" face; 5 and 2 Cans.
2—Sets Textile Dry Cans, 23" & 50"; horizontal stack; 8 and 7 Cans.
1—Set 24—Textile Copper Dry Cans, 23" x 54"; vertical stack.
10—Sets Textile & Butterworth Copper Dry Cans, 23" x 48"; sets of 8, 10, 23, 25, 29 and 30 Cans.
1—Set 22—Textile Dry Cans, 23" x 44"; vertical stack.
2—Butterworth Singeing Machines.
5—Van Vlaanderen & Morrison 2 and 3-Roll Quetches, 50", 60" and 72" in width.
10—Van Vlaanderen, Burkhardt, Fletcher, Tolhurst and King & Gerber Extractors, 42"-60"; Copper, Rubber and Steel Baskets.
2—Van Vlaanderen 54" and 60" Embossers.
2—Parks & Woolson Sanding and Brushing Machines.
4—Gessner Steam Cloth Presses, 50" to 72".
1—Bethlehem 400 Ton Hydraulic Press.
1—Morrison 60" Button Breaker.

DYEING

1—Battery 5—Butterworth Stainless Steel Dye Jiggs.
6—Lincoln 50" Dye Jiggs.
20—Riggs and Lombard, Hunter and Textile Dye Kettles.
1—G. L. Rope Washer.
1—Textile Continuous Full Width Boil-Off Unit, with stainless steel conveyor.
6—Continuous Washers and Crabbs.
1—Rope Washer.
1—Laundry Washer.
1—Textile 3—Compartment Dyeing Machine.
2—Rodney-Hunt 10' Rope Soapers.
5—Textile 50" 2-Roll Dye Padders.
2—Bleach House Jay Pilers.
2—Allen 1½ Ton Kiers, Vomit Type.
5—Butterworth and Textile, 50" 2-Roll Starch Mangles.

FOLDING

2—Van Vlaanderen 2-Roll Beamers, 50" and 60" in width.
6—Eillott & Hall and Curtis & Marble Flat Folders.
2—Parks and Woolson Model E Doubling Reeling and Measuring Machines.
3—Butterworth, Parks & Woolson & Windle Doubling Machines, 48" to 60".
1—National Inspection Machine.
1—King & Gerber 70" Tubing Machine.
1—Parks & Woolson 42" Kaumagraph Machine.
25—Dinsmore Railway Sewing Machines.
Miscl: Nash #4 Vacuum Pump, Connersville-Root Blower Scott Cloth Tester, Batchers, Steamers, Scutchers, Tanks, Generator Sets, Squeeze Rolls, Modine Heaters, Motors, Exhaust Fans, Pleaters, Expanders, Mandrels, Star, Fitting & Furnisher Gears.

SLASHERS.

1—Lowell Machine Co. Slasher.
1—52" Johnson 5-Can Slasher.
Miscl: Batchers, Steamers, Scutchers, Tanks, Generator Sets, Motors, Vacuum Pumps, Squeeze Rolls, Exhaust Fans, Pleaters, Expanders, Mandrels, Star, Fitting & Furnisher Gears.

NOW LIQUIDATING

JEWETT CITY PRINT WORKS

JEWETT CITY, CONN.

A complete printing, finishing and bleaching plant; set up operation position, good buildings, steam and power plant, free water.

FARR ALPACA PLANT
HOLYOKE, MASS.
Tel. Holyoke 7323

WORSTED DRAWING.

3—Sets, 6 operations, consisting of: Double Can gills with coiler motion; 2 spindle gill, 14 x 9; 6 spindle first drawing, 14 x 9; 6 spindle second drawing, 14 x 9, 8 spindle weigh box, 14 x 7; 8 spindle finishers, 12 x 6; 32 spindle flyer rovers, 6 x 3½; Prince-Smith, Saco-Lowell, Hall & Stells.

WORSTED SPINNING.

25—Ring Spinning Frames, 160 spindles, 3½" pitch, 8" traverse, 1¾" ring, 4" front roll.
25—Cap Spinning Frames, 160 spindles, 3½" pitch, 5" traverse, bell cap 1⅜", 4" front roll, self doffers, scaife motion, 2 frames equipped with 2" caps.

Remember we buy single items or complete plants
BUY WITH CONFIDENCE

SERVING INDUSTRY 24 YEARS

Did you receive your copy of the Latest Edition of the CONSOLIDATED NEWS listing our complete stock?

Consolidated Products Co., Inc.

NEW YORK CITY
15 Park Row
Tel. BArclay 7-0600

Address Inquiries to
TEXTILE DIVISION →
Cable Address: Equipment, N. Y.

PATERSON, N. J.
5th Ave. & McClean Blvd.
Tel. ARmory 4-6540

FOR SALE

CARDING AND SPINNING

6 Bowl Sargent 36" Wool Scourer
4 sets—48x48 all iron Woolen Cards D & F.
1—Two cylinder 60 Hunter Garnett
1—One cylinder 60 Hunter Garnett
2—48" Parkhurst Burr Pickers & Feeds
1—Tape Condenser 60"
1—36" Multiplex Burr Picker
2—Schoefield Rag Pickers
1—3 Cyl. J. Hunter Garnet, 30x60"
2—2 Cyl. J. Hunter Garnets, 30x60"
Whitin Twister 5¼" Ring
1—48" Schofield Box Willow
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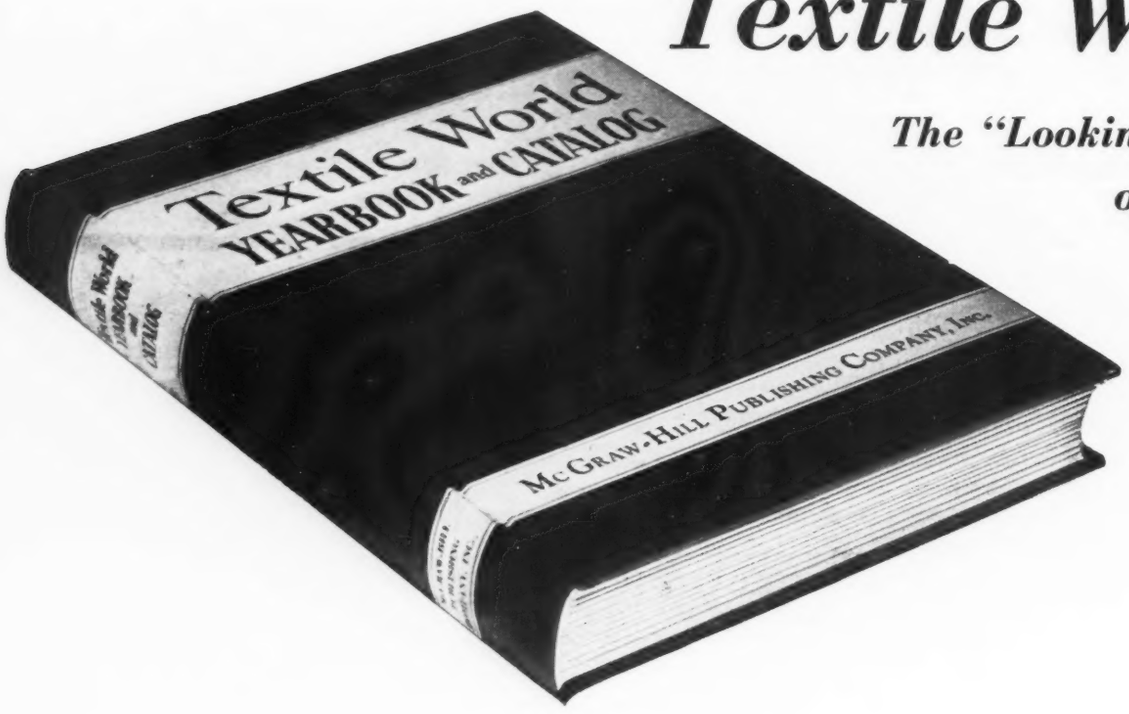

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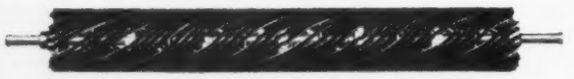

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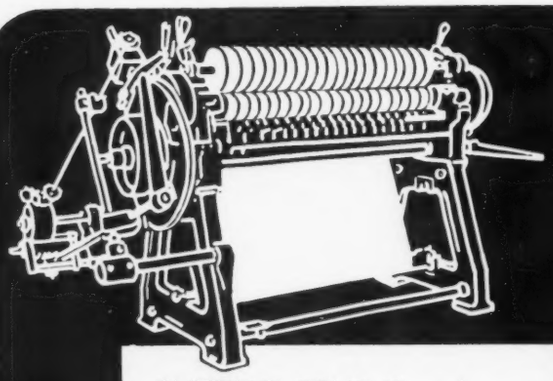

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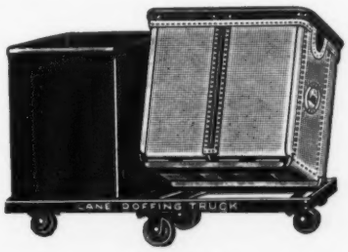

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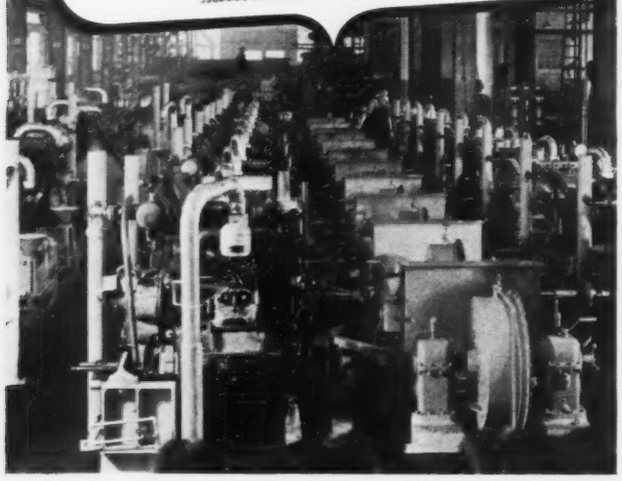

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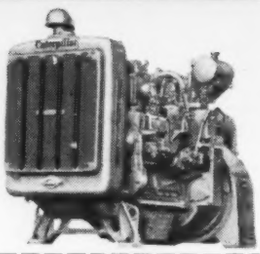

DAY AFTER DAY, "Caterpillar" Diesel Engines by the hundred march out of the factory to tackle the toughest jobs on the defense front.

They're no untried rookies—these husky packages of power. They're seasoned and fit for a hard campaign.

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CATERPILLAR
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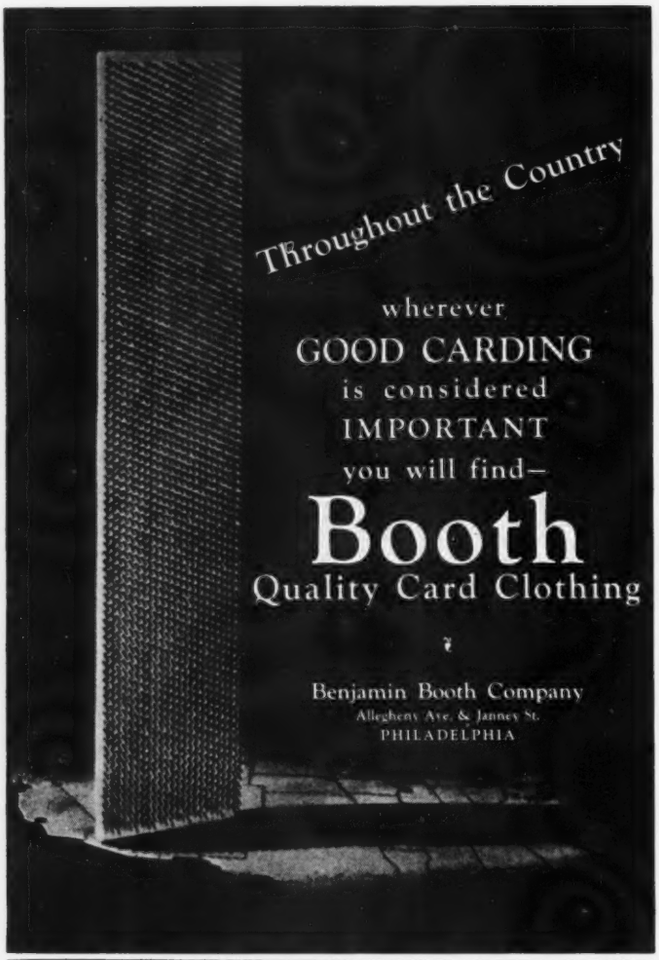
DIESEL ENGINES AND ELECTRIC SETS



WORK and COMFORT *DO* go together!

. . . which accounts for the number of mills being equipped with "Hallowell" Steel Stools and Chairs because they mean *better work, more of it and freedom from fatigue.* Full welded steel construction prevents loose joints and wobble which are likely to develop in ordinary wood or riveted stools . . . streamlined posture design and the spring back add neatness of appearance and stimulating comfort.

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PROCTOR
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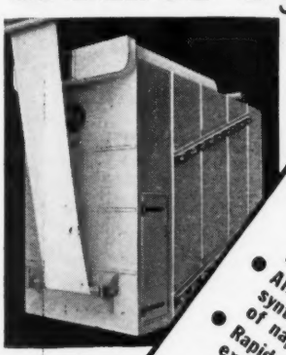
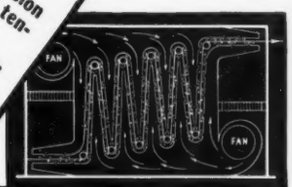


- Replaces drying cylinders or cans in the drying of many types of piece goods.
- Especially desirable for drying dyed fabrics before developing.
- Ideal for the drying and curing of piece goods in the wrinkle-proofing, shrinkage-stabilization and water proofing processes.
- Also for fabrics made from synthetic fibres, and all kinds of nap fabrics.
- Rapid drying means only short exposure of fabric to drying medium.
- There is minimum of tension on goods warpwise and no tension at all on filling.
- There is no narrowing or wrinkling of the fabric.
- Individually motor-driven rolls adjust automatically to the speed fabric is fed.
- Important all-around savings are realized.



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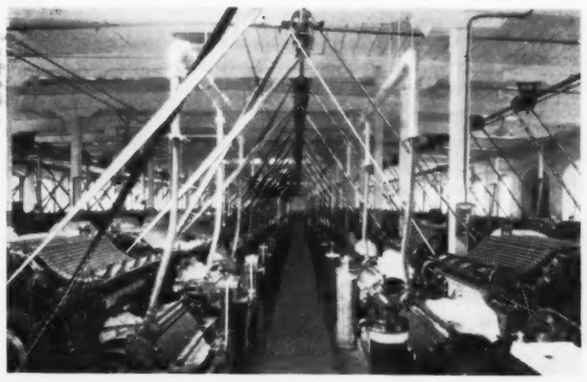

HOW? Survey your drives . . . make sure your production schedule is not being bogged down by slipping belts. Where that condition exists remedy it at once . . . install Rhoads Tannate Watershed Leather Belts. Learn what many mills have known for years . . . the exceptional grip of Tannate assures maximum power transmission . . . keeps machines running smoothly so you get more uniform work, less spoilage, fewer shut-downs, reduced unit costs. Get all the facts by writing us today.

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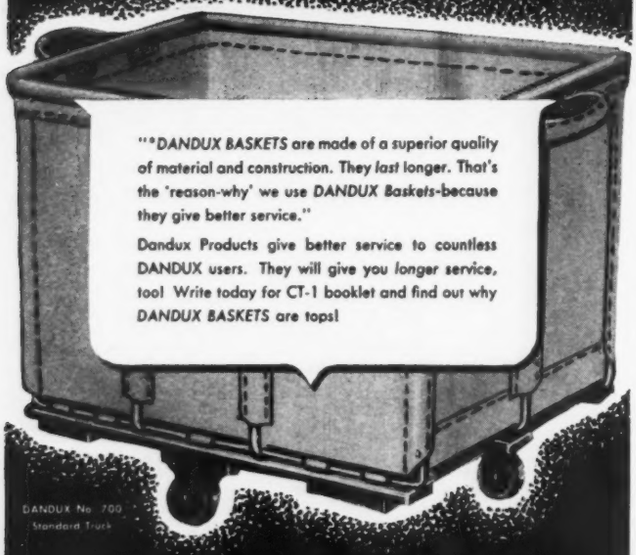
*APPROVED DANDUX BASKETS



"*DANDUX BASKETS are made of a superior quality of material and construction. They *last* longer. That's the 'reason-why' we use *DANDUX Baskets*-because they give better service."

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Coffing Hoist Co.

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—So buyer and seller can agree on the amount of water content to be paid for.

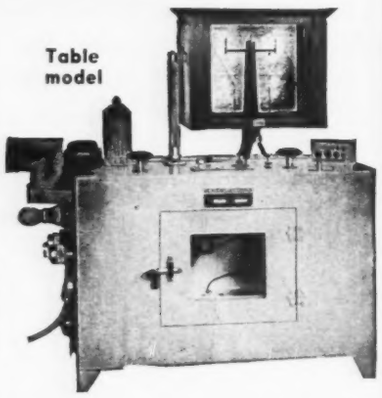
HOW DO WE MAKE REGAIN TESTS?

In standard Emerson conditioning ovens.

STANDARD REGAINS

Raw cotton, 8½% (U. S. Testing Co.); cotton yarn, 7% (D-13); mercerized yarn, 8½% (Nat. Bur. of Stan.); cotton cloth, dyed or undyed, 6½% (U. S. Testing Co.); hard scoured wool, 13.6% (D-13); Bradford-spun worsted yarn, 13% (D-13); French-spun worsted yarn, 15% (D-13); worsted yarn containing silk and/or rayon and/or cotton, in proportion of mix, allowing 11% for rayon and silk and 7% for cotton (D-13); silk, 11% (Nat. Bur. of Stan.); regenerated-cellulose rayon, 11% (D-13); cellulose acetate rayon, 6½% (D-13).

Table model



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1000 RPM

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'Whirlwind'
EXTRACTOR

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